



ATGTTTTCTC CTGTAGTCGT CAGTGTGGTA TTCACAATCG CCTTCTGCAA
TGCGTCTCCA GCAAGAGACA GCTTCGGCTG CTCTAACAGT GGGATAACTG
ACAGCGACCG GCAAGCGTTC CTCGACTTCC ACAACAATGC TCGTCGACGG
GTTGCGAAAG GCCTTGAGGA TAGCAACTCC GGCAAACCTGA ATCCAGCGAA
GAACATGTAC AAGCTGTCAT GGGACTGTGC AATGGAACAG CAGCTTCAGG
ATGCCATCCA GTCATGCCCA AGCGGCTTTG CTGGGATTCA AGGTGTTGCG
CAGAATACAA TGAGCTGGTC AAGCTCTGGT GGATACCCCG ATCCATCGGT
AAAGATAGAA CCAACGCTCT CCGGCTGGTG GAGTGGTGCG AAAAAGAACG
GCGTAGGCCC GGACAACAAA TACACCGGTG GTGGTCTCTT CGCCTTCTCT
AACATGGTAT ACTCCGAAAC GACGAAACTT GGCTGCGCTT ACAAGGTTTG
CGGCACTAAA CTGGCGGTTT CATGCATCTA TAATGGAGTC GGGTACATCA
CAAATCAACC TATGTGGGAG ACAGGTCAGG CTTGCCAGAC AGGAGCAGAC
TGCTCCACTT ACAAGAACTC AGGCTGCGAG GACGGCCTTT GCACGAAGGG
ACCAGATGTA CCAGAAACAA ACCAGCAGTG CCCCTCAAAC ACCGGAATGA
CTGATTCACT CAGAGATACT TTCCTATCGG TGCACAATGA GTTCAGATCG
AGTGTGCCCC GAGGTCTGGA ACCCGACGCT CTGGGCGGAA ATGCACCAAA
AGCAGCTAAA ATGCTCAAGA TGGTGTATGA CTGTGAAGTG GAAGCATCGG
CCATCAGACA TGGAAATAAA TCGTCTATC AACATTCTCA TGGTGAAGAC
AGACCTGGAC TAGGAGAAAA CATCTACAAA ACTAGTGTAC TCAAATTCGA
CAAGAACAAA GCAGCCAAGC AGGCTTCACA ACTCTGGTGG AATGAGTTAA
AAGAGTACGG CGTCGGCCCA TCCAACGTCC TTACCACTGC GTTATGGAAT
AGACCCAACA TGCAGATTGG TCaCTACACC CAGATGGCAT GGGACACCAC
CTACAACTT GGATGTGCAG TTGTTTTCTG CAATGATTTT ACATTCGGCG
TTTGTCACTA TGGGCCAGGA GGCAATTACA TGGGTCATGT CATCTACACT
ATGGGCCAGC CGTGCTCTCA GTGTTCGCCT GGTGCTACTT GCAGCGTGAC
CGAAGGCTTG TGCAGCGCTC CTTAATCAG TCAACAATAA ATATCTTA
CAGTGATGTT GTTGCTTACA AATTGCTTCT TTTCCAATAG AAATACCAAT
GTCAACATCA CGAGTTTCTT TAAATTCATC ACTTCCACTA CTAGGGGTGA
TTTGAATAAA ATTTCATTTT ATAAAGCAAT TACATCCGCA AAAAAAAAAA
AAAA

Figure 1A

MFSPVVVSUVFTIAFCNASPARDSFGCSNSGITDSDRQAF LDFHNNARRRVA
KGLSDNSGKLNPAKNMYKLSWDCAMEQQQLQDAIQSCPSGFAGIQGVAQNTM
SWSSSGGYPDPSVKIEPTLSGWWSGAKKNGVGP DNKYTG GGLFAFSNMVYSE
TTKLGCAYKVCGTKLAVSCIYNGVGYITNQPMWETGQACQTGADCSTYKNSG
CEDGLCTKGPDPETNQQCPSNTGMTDSVRDTFLSVHNEFRSSVARGLEPDA
LGGNAPKAAKMLKMVYDCEVEASAIRHGKNCVYQHS HGEDRPGLGENIYKTS
VLKFDKNKAAKQASQLWWNELKEYGVGPSNVLT TALWNRPNMQIGHYTQMAW
DTTYKLGC AVVFCNDFTFGVCQYGP GGNM GHVIYTMGQPCSQCS PGATCSV

Figure 1B

GGTACTGCAGGGTTTAATTACCCAAGTTTGAGACCCAACGCCATGATTTGGCGAACGTGG
CAAGTTCTCGTGGTCTGTATGCGGCGCTGTCCATTACAGTTGTGAACGCCTATAAACAC
ATTAGCTCCGATCACGTTGTAAATACAACACTGGGTGAGATTCGAGGAGTACCACAGAAT
TTCGAAGGCAAAAAAGTTACCGCTTTTCTTGGTGTGCCATATGGTCAACCACCGACTGGG
GAACTACGATTACGCAATCCGAAAATGGTGCAGCGTTGGGAAGGTATAAAGAATGCTACA
ACACCGGCTCAGCCATGCTTCCACTTCCCTGACAGTAAATTTAAGGGATTTCTGTGGGTCA
GAGATGTGGAATCCGAAAGGAAATATGACCGAGGATTGCTTGAATATGAATATCTGGGTG
CCACACGATGCTGATGGTTCCGTGATTGTATGGATTTTCGGAGGCGGCTTCTTCACCGGT
TCACCATCTTTAGATGTTTACAACGGTACTGCTCTAGCAGCCAAGAAACGTACCATTGTT
GTGAACATAAACTATCGATTGGGTCCCTTCGGTTTCCTTTATCTCGGTGATGATTCTCGT
GCACAAGGGAATATGGGACTGCAAGATCAACAAGTTGCATTGCGATGGGTGCATAAACAT
ATAAGCTCCTTTGGTGGAGATCCGAGAAAAGTCACTCTTTTCGGCGAAGCATCAGGCGCT
GCTTCAGCAACCGCTCATCTAGCAGCACCGGGAAGCTATGAGTTTTTCGATAAGATAATT
GGCAACGGTGGCACAATCATGAATAGTTGGGCCAGTGAACAAATACATCGATGCTTGAG
CTGTCAATGAAACTTGCTGAACGGTTGAACTGTACCAAGAAAAGAAAAGACCCGAATACT
GTACATCGCTGTTTGGTTAAACATCCAGCACATGTGGTTCTAAAAGAGGCCGCTGTTGTG
TCGTATCAAATTGGTCTCGTGCTGACGTTTGCCTTCATACCCATTACCTCTGATAAGAAC
TTCTTCCAGGGAAATGTCTTTGATCGTCTACGAGATAAAGACATTAAGAAGAATGTATCC
ATTGTGCTTGGTACTGTAAAAGACGAAGCAACCTTCTTTTTACCCTACTACTTTGGTCAC
AACGGTTTCTCTTTCAATAACTCATTCTTAGCAGATGGGGAAGAAAACAGAGCACTCATA
AATATATCACAGTATAATTATGCGATGAATGCAACTGCGCCATCACTTGAAAGCTCACTG
GAACCACTTTTAGAAGCTTATAAGAACGTTTCGACGCGAAAAGAAGAAGGTGAAAGATTA
CGCGATGGTGTGGTTCGATTTCATGGGCGACTACTTcTAtACCTGCAGCGTCATTGATTTTC
GCTAATATCGTCTCAGACATTATTAATGGATCTTTGTATATGTATTACTTTACTAAgAGG
TCAGTGGCAAATCCTTGGCCAGAGTGGATGGGTGTAATGCATGGTTATGAAATAGAATAC
GAATTTGGACAGCCTTTCCTAAATTCATCaCTGTACAAGGAAAAGCTTGAAAACGAAAAG
ATcTTCTCGAAAAATATCATGAGCTTTTGGAAAGATTTTCATCAAGACTGGtGTCCCTGTC
GATTTTTTGGCCGAAATACGATCGAAAGGAGCGGAAAGCGCTCGTACTTGCGCAGGAAAGC
GTGAACAATTCTTACCCTAATATGACTAATGTTTCATGGaCCGTACTGTGAACTGATCGAA
GAAGCAAAGGcGTCTACAAATAATGGACTCaCCTTGAAGAAATACATTGAAGGGGAGATA
AAAAATAACGAAACGAACGTATTTTGATAGAATGATTTTGCaCAGAATGAAGAATTGAAT
ATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Figure 2A

MIWRTWQVLVVLAAALSITVVNAYKHISSDHVNTTLGQIRGVPQNFEGKKVTAFLGV
GQPPTGELRFSNPKMVQRWEGIKNATTPAQPCFHFPSKFKGFRGSEMWNPKGNMTEDCL
NMNIWVPHDADGSVIVWIFGGGFFTGSPSLDVYNGTALAANKRTIVVNINYLGPFGFLY
LGDDSRAGQNMGLQDQVALRWVHKHISFGGDPRKVTLFGEASGAASATAHLAAPGSYE
FDKIIIGNGGTIMNSWASRTNTSMLELSMKLAERLNCTKKRKDPNTVHRCCLKHPAHVVL
KEAAVVSQIGLVLTFAFIPITSDKNFFQGNVFDRLRDKDIKKNVSIVLGTVKDEATFFL
PYYFGHNHGSFNNSFLADGEENRALINISQYNYAMNATAPSLESSLEPLLEAYKNVSTRK
EGERLRDGVGRFMGDYFYTCVIDFANIVSDIINGSLYMYFTKRSVANPWPEWMGMH
GYEIEYEFQPFNLSSLYKEKLENEKIFSKNIMSFWKDFIKTGVPVDFWPKYDRKERKAL
VLGEESVNNSPNMTNVHGPYCELIEEAKASTNNGLTLLKKYIEGEIKNNETNVF

Figure 2B

CTCGTGCCGAATTGGGCACGAGCTCCATTATCATCATGCAGCGATCATTCCTACTTCTGTTGTTAGC
AGGTGCCTGGCCGTAAACACAACAATCCCTCTGAAGCTGATGGGAGGTTTACACCTATGAAATATCAA
TGTGTTGGTAGAGTTTCGGACATTTGGGCGGATGTGCTATTTCTGATCGAATCATCCGATATGATTACAA
AATCAGGATTCCGTCAAGTCATCGCATTCATTACGGCGACGACAAAAGATGACAAATCGGTGAGGATGA
AAAGCAGACACGAGTTGGGTTTCATCATACATACGGGGAAGAAACAACTAATCTACGATCTAGATCACTGG
AGGTCAACCGAGAAGCTCAGCGATTAGTGCAAAAAATCCCATACGTAAATCCTCTGGAACAAATATTG
CAGCAGCAATTGCGCTGGCTAACAAAGGTATTCAACTCACCAACACATCGACCGAACGTCCCGAAAAGTGAT
GGTTATTGTCGCTAATGGATTGAAGAAAGGTAGTCAGAATCCGATTCCCGTTGCGACCGCATTCGAAGGAC
TTTGGAGGTATTATAAACAATAGAATACACTCAATACGATAACATTCAGTGCCAAATTTGAAGAAAAAT
TGCTAGCGAAGGATACAAATATTAGAAGCAATGACGAAGATTTTCAGTGTGAGAACGTTAACGAACATGTTG
TTGCAGGCAAAATTTCTGTCCAGACCATACGTTCCATTTCGTGTAATAAACCCCTGAATTTGGTTGTTT
CGTAACTGCAAAAAATTCATCAATGTGGAGGATGCAGCTGAAATGTCCCGCGCGTTGAGGAAGGGAA
ATTAGTGAAGTAGAATGAGGAAAAAGCTGCATTCATCATGAAATTTGGTGGGACCG
AAAAAGGAAGCATGGATTGGATTGAGGTACTATGGGAACAAATCCAGTGGACAGATGGCACTAAGCTCA
ATGCAGACGACTTCAACCTGTGGCCCGAAGATATAAAAGAAATGAATGGACCTCATTTGTATCTATGTA
CCAAGATCAGAAGGACAAAAGTATTATTGGAGAGCCGGTAAATGCCTTGAAGATATGAGATATGTATGC
GAAGTACAGCCATGCAGTGCATCCAACTACTGCTCGAACCCAGTGTTCATGTATCGTCAGAAGCATCGCG
CTCTCCTACCAGCACCAACCACCACTAAGATCTAAAAAATCTGTCCAAAAGAGATACCATGA
CATGTACTTTGATTATGTTGAATAGTGTAATTAATCAGAATGGGGGTAGTGAATAAAACGTACAACATATT
AAAAA

Figure 3A

MQSFLLLLVVLGAWAVNTTIPKLMMGGFTPMKYQCVGRVSDIWADVLFLESSDMITKSG
FRQVIAFITATTKKMTIGQDEKQTRVGFITYGEEAKLIYDLDHWRSTELKSLDLVQKIPYVKS
SGTNIAAAIALANKVFNSTHRPNVPKVMIVANGLKKSQNPPIPVATAFKDFGGIIITIEY
TQYDNIQVPI LKKIASEGYNIRSNDEDFSVRTLTMMLLQANCEFCPDHYVPFRVNNPEFGCFV
TAKIPSMWRDAAEMCRAVEEGKLVKVENEEKAAFIMKLVGPKKEAWIGLRYYGKFKFQWTDGT
KLNADDFNLWPEDIKELNGPHCVSMYQDQDKKYYWRAGKCLEDMRYVCEVQPCASASNYCSE
PVFMYRQKHRALLPAPPPPPN*

Figure 3B

ggcacgaggg gagatggctc gacttgtatt cctactcgta ctatgtactc tggctgcagc
aagcgttcat cgacgactct ttcacgaagc tcgtcgatcat gtgacatcgg tatcgctttc
gcgctcagcca acacttcgtg aacgactgat cgcaagtggc agttgggagg attaccagaa
acaacgctac cattatcgaa agaaaattct agcaaaatat gctgctaaca aagcgtcaaa
gttacaatct gcaaacgaga tcgatgaatt gctccggaac tatatggatg cacaatacta
tgggtgtcatc caaattggga ctccagctca gaatttcact gtgatcttcg acacgggttc
ctcaaatacta tgggtaccgt caagaaagtg tccattctat gacattgcat gtatgcttca
tcacgtttat gactccggag cctcgtcaac ctacaaggaa gatgggcgca agatggctat
tcagtatgga actggatcta tgaaaggatt catttctaag gatattgttt gtattgctgg
aatttgcgct gaagaacaac ctttcgcgga ggctacaagt gaacctgggtc ttacatttat
cgctgctaag tttgatggaa tccttggaat ggcatccccg gaaattgctg ttctcgggtg
aactcctgtc ttccatacgt tcattgaaca gaagaaagt cctagccctg tgtttgcttt
ctggctgaat aggaatccag agtcggaaat tggaggagag attacctttg gtgggttgga
taccgacgt tatgttgaa caattacatg gacaccagt acacgtcgtg gatattggca
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agctatcgct gatactggca cttctcttat tgctggaccg aaggcacagg ttgaggcaat
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ggaagattac gttctaaccg tgaaagccgc tggtaaatca atctgtttgt ctggcttcat
gggaatggac ttccagaga agatcggcga attgtggatc cttggagatg ttttcattgg
aaaatactac accgtcttcg atgttgggtca ggcacgtgtt ggatttgctc aagcaaagtc
agaagatgga ttccctgttg gcacccccgt tcgaacattc agacagcttc aggaagacag
cgatagcgac gaggacgatg tatttacttt ttaagtagtg ttaacatctc caacgtgctc
tgttacttct acgtgtacca tgtttcacgt gtttgctcat ttgataaatt attatcttcc
ct

Figure 4A

MARLVFLLVLCTLAAASVHRRRLFHQARRHVTSVSLSRQPTLRER
LIASGSWEDYQKQRYHYRKKILAKYAANKASKLQSANEIDELLRNYMDAQYYGVIQIG
TPAQNFTVIFDTGSSNLWVPSRKCPFYDIACMLHHRDYGASSTYKEDGRKMAIQYGT
GSMKGFISKDIVCIAGICAEEQPFAEATSEPGLTFIAAKFDGILGMAFPEIAVLGVTP
VFHTFIEQKKVPSPVFAFWLNRNPESEIGGEITFGGVDTRRYVEPITWTPVTRRGYWQ
FKMDMVQGGSSSIACPNCCQAIADTGTSLIAGPKAQVEAIQKYIGAEPLMKGEYMI PC
DKVPSLPDVSFIIDGKTFTLKGEDYVLTVKAAGKSICLSGFMGMDFPEKIGELWILGD
VFIGKYYTVFDVGQARVGFAQAKSEDFPVGTPVTRFRQLQEDSDSDDDVFTF

Figure 4B

ggcacgagag aatgcggttcg atactcgtgt tgggtggctct gatcggatgc attgctgcgg
gtgtatataa aatcccattg aaaagaatca ctccgccgat gataaaaatg ttgagagctg
gtacttgga aacgtacgta gaaggaatga ggaagagaca attacagtta ctgaaggagc
acaaggttca tatccaagat gtactcggct atgctaacat ggagtacctc ggcgaaatta
ctattggaac tcctcaacag aagtttctgg tgggttttga cactggctcc tcgaatctgt
gggtccctga tgattcatgc tacaaggaga agagacctga tagatgtcta gtatcaaact
gtgatgctgg actggtttgt caagtcttct gtccagatcc taaatgctgt gaacatacga
gagaattcaa gcaagtaaac gcatgcaaag ataagcatcg atttgatcaa aagaattcca
acacttatgt taaaacaaac aaaacatggg caatagcgta tggaactgga gatgcgaggg
gattttttgg aagagataca gtccgttttg gtgctgaagg aaaggatcag ctcgttatta
atgatacgtg gttcggacaa gcagagcata tagctgaatt tttcagtaat actttccttg
atggcattct cggactcgtt tttcaagaac tgtcagaagg aggcgtcgtc cctccaataa
ttcgtgccat tgaccttgga cttctcgatc aaccaatatt tactgtctat ttcgaaaatg
tcggagacaa agaaggtggt tatggaggtg ttttcacctg ggggtggtctc gatcccgatc
attgcgaaga tgaggtcaca tatgaacagc taaccgaagc aacttactgg cagtttagac
ttaaaggagt gtcgtctaag aacttctcgt cgacggctgg ttgggaagca atatccgaca
ctggtacctc gttaaatgga gccctaggg ggatactaag aagtattgca agacagtata
atggacagta cgtcgcactc caaggtctct acgtcgtcga ctgcagtaaa aatgtgaccg
ttgacgtgac cattggcgac agaaactaca ctatgactgc gaaaaatctc gtacttgaaa
tacaggctga tatatgtatt atggcatttt tcgaaatgga catgttcatt ggaccagcat
ggattcttgg cgatccattt attcgagaat attgcaatat tcatgacatt gaaaagaagc
ggattggttt tgcagctgta aaacattgat cgattataaa tgtaatgggc tatttgtcat
aaattgctca ataaagtttt ttgactaaaa aaaaaaaaaa aaaaaa

Figure 5A

MRSILVLVALIGCIAAGVYKIPLKRITPPMIKMLRAGTWETIVE
GMRKRQLQLLKEHKVHIQDVLGYANMEYLGEITIGTPQQKFLVVLDTGSSNLWVPDDS
CYKEKRPDRCLVSNCDAGLVCQVFCPDPKCCEHTREFKQVNACKDKHRFDQKNSNTYV
KTNKTWAIAYGTGDARGFFGRDTVRLGAEGKDQLVINDTWFGQAEHIAEFFSNTFLDG
ILGLAFQELSEGGVAPPIIRAIDLGLLDQPIFTVYFENVGDKEGVYGGVFTWGGLDPD
HCEDEVTYEQLTEATYWQFRLKGVSSKNFSSTAGWEAISDTGTSNLGAPRGILRSIAR
QYNGQYVASQGLYVVDCSKNVTVDVTIGDRNYTMTAKNLVLEIQADICIMAFFEMDMF
IGPAWILGDPFIREYCNHDIKKRIGFAAVKH

Figure 5B

AGCATATCAGC**ATGAGAGTCGCTATTGTTTTTCATTGCATGCTTCGCAGTA** 50
GCACACGCATGCAAGTgCGAAAAGAAACCTCGTCCTCCATTGGAGAAACT 100
GCTTTGCCAATCACAATTTGTTACTCACGCGAAAGTGACGAAGAAGAGAA 150
TTGATGGTTACTTCATCTATTACGACTTGGAGCATAAGGaAGTTTATAAG 200
CCCAAAGATAGGAGTATCCCAATCGAACTCTTCTCATGGAGGGAAAAGGA 250
AAATTGTGGTGTTCGGATCTCGAAGAAGGCAAAGAATACCTGATAGGAG 300
GTAAAGTGACGGATTATGGCGACGGTGATTTGGTAATTTCTGTTTCACGG 350
TGCGACCTTCTCCGAAACTGGACAGACGTCTCTGGAGAGGAGAAGAAATT 400
GCTCGGAACGTTCAAATGTGAAAATCAGTCATAAACGCCGATTATATATA 450
ATTGAaAGAAGAGAAATGAACATTTTTTCACGCGAAAAAAAAAAAAAAAAAAAA 550
AAAAAAAAA 559

Figure 6A

M R V A I V F I A C F A V 13
A H A C K C E K K P R P P L E K L 30
L C Q S Q F V T H A K V T K K R 46
I D G Y F I Y Y D L E H K E V Y K 63
P K D R S I P I E L F S W R E K E 80
N C G V P D L E E G K E Y L I G 96
G K V T D Y G D G D L V I S V S R 113
C D L L R N W T D V S G E E K K L 130
L G T F K C E N Q S* 140

Figure 6B

GTGGTTTCAACGTCCTCACATGGCTTAAATTAA
ACGAGAACAAAGATGACTCATACCGGCTCCGAAGATATGGAATGTGGGAGAGCAAGATAATACACCCGTCGTGACAAAT
TTGTAGTTTTGGAAAAAGAGGAGTTAGCAGCAAAGTTGAAGAAAAACACCATATAGGAGGTGGATGAGCAAAACAGTTAG
ACAAATCGTCGGTTATGAAACTCAGGAAATATCAAAAAATGCCCTGTTCACTCCAATAGAACCAAGTAGCCTCAGCGTTGCCCTC
CATTGCGTGTGAATGACCCGAAATATTGTCCGAGTTACGGTGAACCGGATAAGAAAATATGCTATACCTGTAATACGTAACGTAAGCATCT
TATCTCTCAGTGGTCTGGATCAGACTGTAGATCCATCGAGGATCTCTATGCATTCACCTGTAATACGTAACGTAACGTAAGCATCT
TCACAAAGCCACCGACATTGGCGTGAACCGAATCGGAACGTACAAAGACGCTCAAGATGACGTGAACGCTGAAATCGTGG
AAGCACTCGAAGAAGTTAACGTGAGCGACACAAAGTGGTCGGAGACGGAGGCTTGTGAAGCGACTCTCTTACACATGT
GTACACCACTCGAGCGAGGAAACCCATAGACAAATTCGAAGAACGTTCTTATAGAGATGAGAGACTTGTGCGGGAAT
TCCATTCCATCATACTCTGAAGAAGGACATTGATTTCTTTGATATAATGGGAAAGTTCGAGCAGAAATCATGCGATGG
GAACCCCTTCTCGGAGCAATGGTCTCGGTCGATTCAAGAATGTGAACAAACACTCCTTATCTATCGCAGCCCTATCTT
CCAAATGGCTCGAGATTTCTATGTTTTCCCAACACACAAAGATGGTTGAGAAATCGCGTAAGTCTCATCAACTCTGTGCT
GAGGTCGTTCCGAGAGGCTGTTCTGGATGATCCCTCGCCGATCTCGATCTGATGTCAAGATCGGCAAGAGATGTAGTGA
AGCTGGAGATGCAGATTGGCATGGCATCGTGGCCAGAGAGTGAACAGGAACTACGCACAAACAGCAAAATCCACGCACT
TTGAATCAGTTGAAGCAGCGTATCCAGCGATTAAATGGGACAGTTATTCAATGCTCTGCTCTCTTCAACGGTGGCGCAG
CGATATGAATAGGCAGAACATCATACTTACCCAAACCATCGTACTTCGGCTGGTTAAATGCTCTCTTCAACGGTGGCGCAG
ATGACAAAACCATTCGGAATTTCTTCTTTCACCTGATCTCGAGGAGGCTGATTTCTTGGTGGAGCACTTAAAAACG
ATGGTTCAAAAAATCTGATTATGTTCCATATGCTTAGGAAGAGGAAAGGAGTCAAGAGTTGGCCAGCACTTAAACG
ATCACATGACGATACCTGTTGAGGATGCAACATACAGTGTGAACAGCATGATGACGTATATGCCATTTGGACCACTTACTCG
ACGTGTACGTGAAATCAAGGAAGAACAGAGATGACGTTGTCAAGGACATAGACACCGAGCTGGCTTCAAGAAC
TTTGTGAACATGATTGGTAACTTAAATTTGGATGACAGACGATCTCTGGAGCTCGCCATGGAGAAAGCTGATACGATGGT
GAAAACTATGGATGGCCCAAGGATTTGTTGGAAATTTCAAGGATAGTAGCAAGATTGATGCTTATCAAGAAAGGAT
ATGGTAACATCATTAACCTGTACAAGGAGAACATTAATCATAACTACTACCAATCCGAGAACTATGATCAAAAGGCTAT
TCCAACCATGAATCGCTGCGATTGCTGACTGAAGCGCCGAAAGGGACCACTTCTGTTGTACCCGCTCTGGTGAATGC
GTGGTACATACCGGAGAGAAACTCCATCGCATTTCCCTTACGCCCTTGGAAATCCACCCCTATTACAATTACGAATATCCTC
AAGCATGCAACTACGCTGGTCAAGGTGGAACCTGCTGGCCACGAATTAGTGCATGGATTTCGATGACCCAGGAGTACAGTTC
GCTGCCGACGGAAGCCCTTAGCGACTGCACGTGGATCGAGTGTGGATGGTTGGAAGAGAAAGTCCAAGAAAGGATTCAGTGA
TATGGCACAATGTGTGTACACAGTATAGCAACCAATGCTGCCCTCAGACAGGTGGGTCAACCCACTGCGCTAAATGGAG
CGACCAACCAAGGAGAAACATCGCCGATCTTGGAGGTCAACTGGCAGCATATCGAGCTTACCGTGAATACATCACCAAG
GAAAGAGGAGAGGAGAAAGACTGCGCGGATTTGGAGCAGTACACACCAATCAGATCTTCTGGATAACATACGGATA
TTCCGTGGTGCATGAGCCAAACAGATAGCAGTCTTATAGACAACTCTTACCGATGTTCACTCACCTGGCTCATGCCGTG
TTAACCAAGTCATGCAAGATATTCCGGAAATTTGCACCTCGATTTCGGATGTACAATGGGCCAGAAAGTGTATCCAGAGCCT
GAGCAACGATGTCCGGTTTGGGTAGCAGATAAATGTTGAAATGGACCGTCAGATCTCATGTTTTTCACGTTGAATATGA
CGCTCTTAACAGGTTTTTC

Figure 7A

MAKLLLEVTTGLVVLLGVLGVISVVFNVLTWLKLNENKDDSSPAPKIWNVG
EQDNTPLVTNLLVLEKEELAALKKTPYEEVDEQTVRQSSVMKLRNIKNA
LFTPIEPVASALPPLRVNDPKYCPSYGEPAKKYAYQEAASYLLSGLDQTV
DPCEDLYAFTCNTYLNRHNATDIGVNRIGTYKDAQDDVNAEIVEALEEVN
VSDTKWSETERLVKATLFTCVHHTRARKPIDNSKNVLIEMRDLFGGIPFL
NHTLKKDIDFFDIMGKFEQNHAMGTLLGAMVSVDKKNVNKHSFLSQPYL
PMARDFYVFPQHTKMVENRVSLINSVLRSFAEAVLDDPSPYLDLMSRSAR
DVVKLEMQUIAMASWPESELNRNYAQQHNPRTLNQLKAAYPAIKWDSYFNAL
LSSVQGVDMNRQNIILTQPSYFGWLNALFNGGADDKTIANYLLVHLILEE
ADFLGGALKTMVQKSDYVPYALGRGKGVTRVGQQLTRSHDDTVEDANIQC
LNSMMTYMPFGPGYVYVKS RKNRDDVVKDIEHQTELVFKNFVNMIGNLNW
MTDASLELAMEKADTMVKNYGWP KD LFGNFRDSSKIDAYHKKDYGNIINL
YKENITHNYHHIRRTMIKGYSNHESLRLLTEAPKR DHFLLSPALVNAWYI
PERNSIAFPYAFWNPPYYNYEYPQACNYAGQGGTAGHEL VHGFDDQGVQF
AADGSLSDCTWIECGWLEEKSKKGFSDMAQC VVTQYSTQCCPQTGGVTHC
ANGATTQGENIADLGGQLAAYRAYREYITKERGEEEEKRLPGLEQYTPNQI
FWITYGYSWCMSQTDSSLIRQLLTDVHSPGSCR VNQVMQDIPEFALDFGC
TMGQKMYPEPEQRCPVWVAE*

Figure 7B

GGGTTTAATTACCCAAGTTTGAGGATGAGGGTACTCCTGTTACTGCTACTTTTATCCATT
TGCGCGAGCGCTGGCTTTCTAGACACTAAATTCGGCCAGAAGATAAAGAAAACCTCTTGAC
AAGATTAAAGCTGTGCTTAACGGCACTGCACTCATCGCGATTTCGTGAAAAATTCATTGCA
CTAAGGGAAAAAATAAAGCAAAGCTGACGCTCTCTCCAGCACGAAAGGCTATATTGGAC
GAAGTTATGAAGCaTATCAAAATGATCAAAAAGGATAAGATTCAAGAGAAGGGCGACTCA
ATCGATGAAATCAATGAAAAGAGTGCAATCGGACAGTTGCTGTACCAGGGTGACATCGTT
CTGACAGAAAAGCAAGCCCAGCAAATTACCGAAGACATTGAAAATGACAAAGGCGACCGC
GAAAAACGACAGGCGTTCCGTGATCGCAATTATCCGCGAACATTATGGTCTGAAGGGAGTG
TACTTTCACTTTTCATAGGAACGCAACTCCTGAAGTTAGAAGCGTTTTTGTGAAAGGCGCA
AACTTTGGATGAAGGATACTTGCATCGACTTCTTCGAAAGCAACTCAGCGCCTGATAGG
ATTCTGTGTGTTCAAAGAGAACGGATGTTGGTTCGTACGTTGGTAGGCTGGGCGGTGAACAA
GATCTGTCACTGGGAGAAgGTTGTCAATCGGTTGGCACAGCTGCGCACGAAATTGGCCAC
GCTATTGGCTTCTACCACACTCACGCAAGACATGATCGCGATAACTTTaTTACATTCaAC
GCACAAAATGTCAAGCCCGATTGGTTGGACCAATTCCTCTCAGACTCCGGCAACGAAT
GAGAACTATGGAATAACTTACGACTATGGAAGTATCATGCATTATGGTGCAAATAGCGCC
TCGCAGAACGGACGTCTTACAATGGTTCCGCATGATCCCAAATACGTAGAACTCTTGGA
TCACCCATAATTtCCTTCTATGAGCTTCTCATGATCAACAAACACTACGACTGCACTAAG
AACTGTGACCCGGCTACTTCTGCGCAGTGTAAGATGGGTGGCTTCCCACATCCTCGGGAT
TGTACAAGATGCATTTGCCCTAGTGATATGGAGGCAAACTGTGCGACCAGAAGCCAGCC
GGATGCGGATCTATATACcAGgCCACCAATCAGTACCAGACCTTGACGACGAAATTGGA
GACAAGAGAGCGGGACAGAGACCTAGAGAAGACATGGACTTCTGCTATTATTGGATCACG
GCCCCAAAAGGTTCAAAAATCGAAATCAAAATTGCTGGATTATCACAAGGAGCCGCTGTT
GAAGGATGCCAGTACTGGGGAGTAGAAATCAAGACTCATGCCGATCAACGTCTTACCGGC
TACAGGTTCTGCGCACCAAGATGTTGGAGTTAGATTAGTGTCGAACTTCAACATCGTA
CCAATAATCACATACAACATATTCTACGCGACCTATGTCGATATTCAGTACCGTATCGTT
GGTGATAATGTTGGCGGTCCTATGCCTCAGCCACAACCAAATAGCAATTGTGTGCGACAAT
GAACAGTGTGCGACACTCGTGAGAACAAAGAACTTCTGTGAGAGCAGATTTTTTACAGAG
TCCGTCaAAAGAGGTCTATGTCCAAAGTCCAGCGGTTTCTGTGCTAACTTTTTCAGCAAA
CAATGGAATAAATGTTGCACCATAAAAAAAAAAAAAATAAAAAA

Figure 8A

MRVLLLLLLLLSICASAGFLDTKFGQKIKKTLDKIKAVLNGTALIAIREKFIRLREKIKAK
LTLSPARKAILDEVMKHIKMIKKDKIQEKGDSIDEINEKSAIGQLLYQGDIVLTEKQAQQ
ITEDIENDKGDREKRQAFRDRNYPRTLWSKGVYFHFHRNATPEVRSVVFVKAKLWMKDT
IDFFESNSAPDRIRVFKENGCSYVGRGLGGEQDLSLGEQCQSVGTAAHEIGHAIGFYHTH
ARHDRDNFITFNAQNVKPDWLDQFTLQTPATNENYGITYDYGSIMHYGANSASQNGRPTM
VPHDPKYVETLGSPiISFYELLMINKHYDCTKNCDPATSAQCKMGGFPHPRDCTRCICPS
GYGGKLCDQKPAGCGSIYQATNQYQTLHDEIGDKRAGQRPREDMDFCYWITAPKGSKIE
IKIAGLSQGAAVEGCQYWGVEIKTHADQRLTGyRFCAPEDVGVRLVSNFNIVPIITYNIF
YATYVDIQYRIVGDNVGGPMPQPQPNsNCVDNEQCATLVRTKNFCQSRFFTESVKRGLCP
KSSGFCR*

Figure 8B

```
ATGTTTTTAC CTGTAATcGT CAGTGTGATT TTCACAATCG CCTTCTGCGA
tgcgtctcca gcaagagacG GCTTCGGCTG TTCAAACAGT GGGATAACTG
ACAAGGACCG GCAAGCATTC CTCGACTTCC ACAACAATGC TCGTCGACGG
GTTGCGAAAG GCGTTGAGGA TAGCAACTCC GGCAAACTGA ATCCAGCGAA
GAACATGTAC AAGCTgtCAT GGGACTGTGC AATGGAACAG CAGCTTCAGG
ATGCCATTCA GTCATGCCCC AGCGcgTTCG CTGGAATTCA AGGTGTTGCG
CAGAATGTAA TGAGCTGGTC AAGCTCTGGT GGATTCCCCG ATCCATCGGT
AAAGATAGAA CAAACGCTCT CCGGCTGGTG GAGTGGTGCT AAAAAGAACG
GCGTCGGCCC GGACAACAAA TACAACGGTG GCGGTCTCTT CGCCTTCTCT
AACATGGTAT ACTCCGAAAC GACGAAACTT GGCTGCGCcT ACAAGGTTTG
CGGCACTAAA CTGGCGGTTT CGTGCATCTA TAATGGAGTC GGGTACATCA
CAAATCAACC TATGTGGGAG ACAGGTCAGG CTTGCAAGAC AGGAGCAGAC
TGCTCCACTT ACAAGAACTC AGGCTGCGAG GATGGCCTTT GCACGAAAGG
ACCAGACGTA CCAGAAACAA ACCAGCAGTG CCCCTCAAAC ActGGAATga
ctgattcagt cagagatact ttcctatcgg tgcacaaatga GTTCAGGTCG
AGTGTTGCCC GAGGTCTGGA ACCCGACGCT CTGGGCGGAA ATGCACCAAA
AGCAGCTAAA ATgCTCAAGA TGGTGTATGA CTGTGAAGTA GAAGCATCGG
CCATCAGACA TGGAAATAAA TGCGTCTATC AACATTCCCA TGGCGAAGAC
AGACCTGGAC TAGGAGAAAA CATCTACAAG ACTAGTGTAC TCAAATTCTGA
TAAGAACAAA GCAGCCAAGC AGGCTTCACA ACTCTGGTGG AATGAGTTAA
AAGAGTTCGG CGTCGGCCCC TCCAACGTCC TTACCACTGC TTTATGGAAT
AGACCCGGCA TGCAGATTGG TCACTACACC CAGATGGCAT GGGACACCAC
CTACAACTT GGATGTGCAG TTGTTTTCTG CAATGATTTC ACATTCGGTG
TTTGTACAGTA TGGGCCAGGA GGCAATTACA TGGGTCATGT CATCTACACT
ATGGGCCAGC CGTGTTCTCA GTGTTCGCCT GGTGCTACTT GCAGCGTGAC
CGAAGGCTTG TGCAGTGCTC CTTAATCAGT TCTTAACAAT GAATATCTTA
CAGTTGAAAA AAAAAAAAAA AAAAAAAAAA
```

Figure 9A

```
MFSPVIVSVIFTIAFCDASPARDGFSGNSGITDKDRQAFLEDFHNNARRRVAKGVEDSNS
GKLNPAKNMYKLSWDCAMEQQQLQDAIQSCPSAFAGIQGVAQNVMSWSSSGGFPDPSVKIE
QTLSGWWSGAKKNGVGPDKYNGGGLFAFSNMVYSETTKLGCAVKVCGTKLAVSCIYNGV
GYITNQPMWETGQACKTGADCSTYKNSGCEGLCTKGPDPVPETNQQCPSNTGMTDSVRDT
FLSVHNEFRSSVARGLEPDALGGNAPKAAKMLKMVDCEVEASAIRHGKNCVYQHSBGED
RPGLGENIYKTSVLKFDKNKAAKQASQLWWNELKEFGVGPSNVLTALWNRPGMQIGHYT
QMAWDTTYKLGCVVFCNDFTFGVCQYGPGGNYMGHVIYTMGQPCSQCSFGATCSVTEGL
CSAP*
```

Figure 9B

cGACACAACCAACGATGTTAGTTCTTGTAACCACTTTTGGCTCTCTTGGCTGTTTCTGTTTCATGGAAATTCTATGA
GATGCGGAAATAATGGAATGACCGACGAAGCCCGGCAGAAATTCTCTGACGTGCACAAACAGTTACAGATCTATGG
TTGCCAAAGGACAGGCAAGGATGCAATTTCGGGAAATGCTCCGAAGGTGCCAAATGAAGAAATGATCTACG
ACTGCAACGTCGAATCAACTGCAATGCAAAATGCGAAAAAATGTGTTTTCGCCCATTCGCACAGGAAGGGAGTTG
GCGAAAAATATTTGGATGTCGACTGCGCTAGATGGACAAAGCACAAGCTGCTCAACAGGCTAGTGACGGTTGGT
TCAGTGAGCTTGCGAAGTATGGTGTAGGCCAGGAAAAACAAGCTAACACGAGTTGTGGAACAGGGGAGTTATGA
TAGGACATTACACTCAGATGGTCTGGCAGGAGTCTACAACTCGGATGTTATGTGGAATGGTGTTCATCGATGA
CCTATGGTGTCTGCCAGTACAGTCTCAGGGTAATGATGAACCTCACTCATCTACGAGAAAGGAAACCCCGTGCA
CAAAAGACTCTGACTGTGGCTCGAACGCCAGTTGCAGCGCTGGGGAGGcgCTTTGCGTcTgTGCGTGGCTAgCTGG
ACATTCCCaACGTACAACACAGCGTTATAgTTAAATGCaACTTTTCTtTTCATCtTAtTGAgTAAAGGCaTGAaAAACa
aaaaaaaaaaaaaaaa

Figure 10A

MLVLVPLLLAVSVHGNMRCGNNGMTDEARQKFLDVHNSYRSMVAKGQAKDAISGNAPKAAKMKMIY
DCNVESTAMQNAKKCVFAHSHRKGVGGENIWMSTARQMDKAQAAQQAASDGFSELAKEYGVGQENKLTTLW
NRGVMIGHYTMVWQESYKLGCVVEWCSSMTYGVQCYSPPQGNMNSLIYEKGNPCTKDSDCGSNASCAG
EALCVVRG*

Figure 10B

ATAAGACAGCAATGAAGTCCTATCTTGTGATATCAGCTGCGATCCTCGGCATTGCTTA
TGCCGATGCTGATTATTCCAAGTGCCCGCAAAATGAAATAATGAACAACGATATGAGG
GAAAAAGTTACGGACATGCACAACGCCTACAGATCCAAATTCGCACGGGATCATCAAG
CTTCGAAAATGAGAAAATTGGTTTACGACTGTGCCATCGAAAAAGGAATCTACGAGTC
GGATACCAAGTGCGAGATGAAACCATCGATGGAGGAGGAGAACGTAGAAGTTATCGAC
GGCAACAGCGATGATCTCACTGTTATTTTCAGAGGCCGGTAATTCGTGGTGGAGCGAGA
TTTTGGACCTGAAAGGAAAGGATGTGTACAACCTCCGTGGACAATACATCGGAAATTGC
CAATATGGCTTGGGAAAGTCATGCGAAACTTGTTGCGCAGTTGTTGAGTGCTCCAAG
AAAACCCATGTAGTCTGCCGATACGGACCGGAAGGAAAAGGTGAAGGAAAGAAAAATTT
ACGAAAAGGGCGAAAACATGCTCACAATGCAGTGATTACGGACAAGGTGTCACCTGTGA
CAATGACGAGTGGGAGGGATTACTCTGCTCATAATATTGGAAAAACATATGTGGATGA
TGATGTTTCGCAATAAATAAATCAATTACAAAAAAAAAAAAAAAAAAAAA

Figure 11A

MKSYLVISAAILGIAYADADYSKCPQNEIMNNDMREKVTDNMHNAYRSKFARDHQAS
KMRKLVYDCAIEKGIYESDTKCEMKPSMEEENVEVIDGNSDDLTVISEAGNSWWSE
ILDLKGKDVYNSVDNTSEIANMAWESHAKLGCAVVECSKKTHVVCRYGPEGKGEK
KIYEKGETCSQCSQDYGGVTCNDNDEWEGLLCS*

Figure 11B

AGAACATGATCAACATCCATTTTCATAGCGCTTGCCATAACCTCTCTTTTGCCTGCCCTAT
CCGAAGGGAAACCGGTCGTATTTGTTGAACCACAGTGTAAGCCGAATGGTTACCTACACA
AGAATACAATCGACAACAATGTTCTTAAGCCGATAAATACTCGTCGAGAGGCTCTGGCCA
AGGGCACGCAACAGAATGGCTTTGACCCACCAAAACCCACAAACATTCTTGCCACCAGCGA
CGGACATGACTAAACTGAGTTGGAGTTGTGATCTTGAGCAGAAGGCTATAAAAACTATCA
ACGGTAACTGTGTGAATCCGGCAAACCCAAACCAACCGAATAACGGCGAAGGATTGGCAG
ATGTCCTCTACTACGGCAACGACTATGATAACACGGTCGAAGGAGTGATCCAAGGCAATC
TCGAAGCTTGGCTGGTAAAAGCCGATTTCAATGTATTCCCTGTTACCACAAAAGGTACCG
TCATTAGCTATCCCACTTACAATGGCAACACAGATCTCTTGGCATACTCTAACTTAGTCC
GGCCTACCAATACTGAGATAGGATGTGTACTGGAAAGATGTCCAGCTACAGCCAATGTTT
CAAAGCTAGTCACGTTCTACTGTATTTTGAATGGAAAAATATCACCAACGGAGAGGCTC
TCTATAAGGGCACAACTGTGAATACCGGAGGATGCAAAGAGGTCACATGCTCAGCGGGAT
ATGCCTGTAACAACGCCACCTTGCTATGTGAACGTAGTGCGACAACAAGCTCATCTACAT
CGGCAAGCACATCTTCATCAACAGCTTCCTCAACAAGTTCATCTATGGCAATAAGCACAT
CTTCGTCAACAAGCGCATCTGGGGCAACAACAACAAAAGCTCCTTCTCCGCAAGCGCAAT
TCCCCACAGGGACTAGCACTATGTGCAATACCAGGCATGCCTATGCTAACAGGATGACCG
ACAATCTCAGGAATGAATACGTAAGGCTGCACAACCTCCGAAGAGGCTTACTCGCAAAGG
GAGAAATTCCTCAGAAGGGTAACATATACCTACCAAAGGCGGCTGACATGTGAAAATTA
GTTACGACTGCGGCCTGGAACAAGGAGCCATAGAACACGCAAGCCAGTGTCTCACAGGAG
GGTCCGGACAAAGCTCGAGACCAGGTGTGGGAGAGAAGCTTTAAAGTGATCCCAGCGGCAA
GATTTCCGACTTTTCGAAGATGCAGCAAAAAAGACCGTTACTGAATGGTGGAAGCCGATTC
GTAACGTGGACTACTTCGGAACAACGTCAACTTCCTCCCCATCTATGACCAAGACCCGA
TATCCTCCTTTACCCGGATGGCATGGGCCACAACCTAACAAGGTGGGGTGCTCTATCGTAA
AGTGACAACGGACAACGTATACGTAGGCGTGTGCCGATATAGTCCAATGGGTAACATTG
TGAACAGCAACATCTACCAAATTGGGAATCCCTGCAGTGTGAGACCTACTCAAGCGACCG
GGTGTGACCCAGTCGAGGGATTGTGGTACTAGGCGCACTTTTCCGCACTGAATGGCGATT
CTGTTTTGAATTTTTGAATATTACATTAATGGATGTTAACAATGGGTCCCTTAGTTTTCT
GTTGTTAACAAGGGTGGTTAGATTGGATTGGGAATAAATGATGCAATCGCCAAAAAAAAA
AAAAAAAAA

Figure 12A

MINIHFIALAITSLLPALSEGKPVVFVEPQCKPNGYLHKNTIDNNVLKPI
NTRREALAKGTQQNGFDPPNPQTFLPPATDMTKLSWSCDLEQKAIKTING
NCVNPANPTKPNNGEGLADVLYYGNNDYDNTVEGVIQGNLEAWLVKADFN
FPVTTKGTVISYPTYNGNTDLLAYSNLVRPTNTEIGCVLERCPATANVPK
LVTFYCILNGKNITNGEALYKGTTVNTGGCKEVTCSAGYACNNATLLCER
SATTSSSTSASTSSSTASSTSSSMAISTSSSTSASGATTTKAPSPQAQFP
TGTSTMCNTRHAYANRMTDNLNREYVRLHNFRRGLLAKGEIPQKGNIYLP
KAADMWKISYDCGLEQGAIEHASQCLTGGSGQSSRPGVGENFKVIPARF
PTFEDAANKTVTEWWKPIRNVDFGNNVNFLPIYDQDPISSFTRMAWATT
NKVGCISIVKCTTDNVYVGVCRYSPMGNIIVNSNIYQIGNPCSVRPTQATGC
DPVEGLWY*

Figure 12B

ATACTACTGCAGTGTGCGTTTAGGAGAACTCTCACTGCATCGAAAATGCCGAATCTACTC
CTGCTGCTGTTTCTCTCGCTACCAGGAGCGATTCTTCAACCACTTGTCAGGAAATGAT
CTAACAGATGCTGAACGCACACTGCTAACTAGGGTGCACAATTCATTTCGACGGGAAATA
GCGCAAGGAGTTGCAAACAACCTACCATGGTGGTAAACTGCCTGCTGGAAAGAACATATAC
AGGATGAGATACAGCTGTGAGCTGGAACAGGCTGCTATTGATGCTAGTCAAACCTTCTGT
TCCGCATCATTGGAGGAACACAGAAATATGGACAAAACATCCAAGCATAACGTACACCA
TCTATAATCGCTCGCCCGAAAAACGACCTTCTTGAAGATGCAGTGAAACAATGGTATCTG
CCTGTTATCTACTACGGCCAGCGCGACGCGGCAACAAGTTTACGGATCCGCGCTTGTAC
ACATTTGCAAACCTCGCCTACGACAAGAACTGCACTTGGCTGTCACTATGCGAAATGT
CAAGGCCCTGACAGAATCGTCATTAGTTGCATGTACAACAACGTCGTTCCCTGACAACGCA
GTGATCTACGAGCCTGGAAGTGTGCGTAAAAGATGCGGACTGCACTACTTATCCTCAG
TCCACATGCAAGGACAGCCTTTGCATTATTCCTACGCCACATCCACCAATCCACCAAT
CCACCACCAGCAATGAGTCCAAACGCTGAAATGACTGATGCAGCACGAAAGAAGGTCCTC
GGCATGCACAACCTGGCGCAGATCGCAGGTGCTCTGGGAAACGTTCAAACGGGAAAAAT
GCTTACAACCTGCCCCACTGCAACAGACATGTACAAGATAGAATATGATTGCGACCTCGAG
AACAGCGCTCTAGCGTATGCAAAGCAATGTAGTCTCGTTGGTTCAGCAGAAGGAACTCGT
CCAGGAGAAGGCGAGAATGTCCACAAAGGCGCTCTCGTAACCGATCCGGAGGCTGCAGTT
CAGACCGCAGTTCAAGCATGGTGGAGTCAAATCTCACAAAATGGACTCAATGCACAGATG
AAATTCAGTGTCTTCTTGAAGGACAAGCCTGACGCTCCGACAGCGTTTACACAGATGGCG
TGGGCCAAATCCGTAAAGCTTGGATGTGCTGTCTCTAATTGTCAGGCAGATACCTTACC
GTCTGTAGATACAAAGCTGCCGGAACATCGTGGGCGAATTCATCTATACCAAGGGAAAT
GTATGCGACGCCTGTAAAGCCACATGCATTACCGCGGAAGGTCTTTGCCCAACGCCTTGA
TTTTCACTGGACTGTTTCACGAACAGATCAGATAAATCGTTTCATCAAAAAAAAAAAAAA
AAAA

Figure 13A

MPNLLLLLFLSLPGAILSTTCPGNDLTDARTLLTRVHNSIRREIAQGVANNYHGGKLPA
GKNYRMRYSCLEQAADASQTFCSASLEEPQKYGQNIQAYVTPSIIARPKNLDLEDAV
KQWYLPVIYYQRDAANKFTDPRLYTFANLAYDKNTALGCHYAKCQGPDRIVISCMYNNV
VPDNAVIIYEPGTACVKDADCTTYPQSTCKDSLIIPTPHPPNPPNPPAMSPNAEMTDAA
RKKVLGMHNWRRSQVALGNVQNGKNAYNCPTATDMYKIEYDCDLENSALAYAKQCSLVGS
AEGTRPGEGENVHKALVTDPEAAVQTAVQAWWSQISQNLNAQMKFTAFLKDKPDAPTA
FTQMAWAKSVKLGCAVSNCQADTFTVCRYKAAGNIVGEFIYTKGNVCDACKATCITAEG
LCTP*

Figure 13B

CAGCAATAGTCCAATGAAGCTCTTCATTCTGGTTTTGGTCGCTATCCTTGGCATTGCTCA
CGCCACTGATTTTCAATGCTGGAACCTCAAATCGACGGATACACTGCGGGAACATTACCT
CAAATCCATTAACAACCTAAGGAAGAAAATCGCCGATGGATCAGCGGAAAACAAATCAGG
AAAGTGCCCGCAGGGCAAGAATATCTACAAGCTAAGCTGGGATTGTGAATTGGAAGTAA
AGCACAGCAAGCTGTAGACCAGTGCAAACCGAATGTACCCGAACCCGCAGGATATTCGCA
AATACTAAAGAAGGTTAAAAGCACCTGCGACCCAACGAAGGTCCTGAAGAAACAGATAGA
AGCATGGTGGACTAAGTCCGTGAAAGATGCTGGAGTTGATAATCCTCCAAACAACAAACA
AGGTTTGAAGATTTTCGCAAAGTTAGCAAATGGAAAGGCTACGAAGATTGGTTGTGCGCA
GAAAACTGCAACGAACAGTTGTACGTGGCATGTGTTATTAACGAACCGGCTCCTGCAGT
GGGTATGCCAATCTATGAGGTTGGAGCTGGATGTAATTCCAAAGACGATTGTACAACGTA
TCTGCAGTCGAAGTGCAGTAACAAAGTATGCGTCGCCGGGCACCCAGGTGATGCCACCAC
TACAACATCAACACCAGCPACAACAGCACCAACAACACCCACGATTCTGCTGGACCAAC
AACTGCGCCAGCTCCACCACCAACAACCTGCAGCTCCTACAACGACGAGTACGATTGGTTC
GATTGACAATACGATTTGTCCGCAAAACCAAGTGATCACCGACTCAGTCAGGCTCACATT
CTTGAATACGCACAACGGACTCAGATCTCAACTCGCGCAAGGTCAAATCTTTATGGGAAA
TGCGCTAGGGCGCGTCCGGCATCGAAAATGAGGAGGATGGTATATAACTGTGATGCGGA
ATCAAGCGCTCGCAATTCGGCCGCTCAGTGCCTTAGCAGCCCCGGTTCACCTAGCGGCTA
CACTGAGAACTTGCAATGTTATCAACAACAACCTTTGTGGACCATAACAGTGCAGGCTACTCA
GGCTTTTAACGCATGGTGGTCAGAAATTAACACAGGATATATGCGTCAGGCAGAGACGGA
AAGGAATATGTACTCTCTGAGCGTTGGAATACCAAACCTTCGCTAAAATGGCTTGGGAAAC
CAATGCACATCTTGGTTGTGCTATAGTCAGATGCGGTTTGAACACGAACGTCGTCTGCCC
CTACTCCCCAAAATCGGATGGAGGCCAAATTTACAAGATGGGCCCCCTTTTGACAGACGTTG
CCCCGACTACCTGGGACTTTTTGCAACCAAGGACTCTGCTCATTTTAAGACCCGCCCCG
ATATATCTTTGGGGAGATAATTTTACGAGCAATAAACCAAGCGTGAAGAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Figure 14A

MKLFILVLVAILGIAHATDFQCWNFKSTDTLREHYLKSINNLRKKIADGSAENKSGKCPQGKNIYK
LSWDCELELKAQQAVDQCKPNVPEPAGYSQILKKVKSTCDPTKVLKKQIEAWWTKSVKDAGVDNP
PNNKQGLEDFAKLANGKATKIGCAQKNCNEQLYVACVINEPAPAVGMPIYEVGAGCNSKDDCTTY
LQSKCSNKVCVAGHPGDATTTTSTPATTAPTPTIPAGPTTAPAPPTTAAPTSTIGSIDNTI
CPQNQVITDSVRLTFLNTHNGLRSQLAQGQIFMGNGARARPASKMRRMVYNCDAAESSARNSAAQC
LSSPGSPSGYTENLHVINNHFVDHNSAATQAFNAWWSEINTGYMRQAETERMYSLSVGIPNFAK
MAWETNAHLGCAIVRCGLNTNVVPCPYSPKSDGGQIYKMGPFCRRCPDYPGTFCNQGLCSF*

Figure 14B

```
1   GGGTTTAATT ACCCAAGTTT GAGAATGATT CAATTGTTTT TGTTAGCGCT
51  CGTACCTATG TGCATCTCAG TGAGGGAACA GTCGATAGCT GTTAAAGGAC
101 GACTTTTGTG TGGCGATCAA CCAGCTGCGA ACGTCAGAGT AAAGTTATGG
151 GAGGAAGACA CAGGACCAGA TCCAGATGAC CTACTGGATG CAGGATACAC
201 GAACTCCAAC GGTGAATTCC AACTCCAAGG CGGAACAATA GAGACGACTC
251 CTATTGACCC CGTCTTGAAA ATTTATCATG ATTGCAATGA CGTGACTGGT
301 TTCCTAAGCG TACCTAAACC TGGCAGCAGA AAGGTGAGGT TCTCCTTACC
351 AGACAAGTAC ATCAGCGATG GAATGGTTCC TAAGAAAGTT ATGGACATCG
401 GTGTTATCAA TCTTGAAGTG GAATTTGAAA AGGAAGGACG TGAATTTATC
451 GTTGACTAAG TGATCAATAA ACTCATCGCT TTCTCTTTCT ATGTAAACAT
501 TTTTGTTGTG AACAAATCAT ATGGTTGTAC ATAATCCGAA CTGTTGGTTT
551 TTCGAATACT GCACAAATAA AGCATTTCTT CTAAAAAAAA AAAAAAAAAA
601 AA
```

Figure 15A

```
1   MIQLFLLALV PMCISVREQS IAVKGRLLCG DQPAANVRVK LWEEDTGPD
51  DDLLDAGYTN SNGEFQLQGG TIETTPIDPV LKIYHDCNDV TGFLSVKPG
101 SRKVRFSLPD KYISDGMVVK KVMDIGVINL EVEFEKEGRE FIVD
```

Figure 15B

CACTTCCAGCGATGTTCTGTCGTGTTACTGTGCGCGTTTTGTGTTGGCCGTATCGGCCCTATGCCCGGA
TTTTTCGATGACGTCAGTGGCATGGCCCTCAGATGTTGGGAATTTCTTCACAAAACCAATTCAACAATGT
GAAGGATTTGTTGCTGGAAATCAATCGGAACCTCGAGAAGAACATCAATCGAGTAAAGGATCTTCTGA
CGCCCGTCAAAGAAAAGGCTAAGATGCTTGAACCAATGGCCAATGATGCTCAGAAGAAAGACGTTATCA
CAGGTGGACAACCTACCTCAACGaaGTGCAACAGTTCGGTGAACAGGTAAAGCAAAAGAAAGGCTCGCGGAA
GTTTCGAGGAGAACAAAGGCAAGTGGCAGCAATGCTGAACGACATCTTCGAGAAGGGCGGTCTGGACG
GCGTGTGAAGCTGCTCAATCTGAAATCTGCCGGCCACTGCACACTCGTAGCGGCCATCGTCGCTCCA
GTAGTGTGGCGTTACCCCGCTAAGCGCCACCCCACTAATCGATAATTGTAGCCTGTCACTGCGCGTCG
ATCGATAATTGTTGTCGCGTGTGCGTATGCTTGCACTCTATGATGATGTGTATCTATATGTGATT
TGTAATCTACTTCGCGCGCATTCAGCTCTGGTATCTGAGACGGATTATCGCTTCTCGCACACACTCAC
ACACACAAATAACCCCGATTATCTCCCGATTATCACCCGGTTAGTAGATGAGACATAATTCCATCC
GTCCACATACTCTACTTCTATCTATGCTCAATGTGGTCTTTTATGTAAATAAACTTTTCCATCGAAAA
AAAAAAAAAAAAAAAAAAAA

Figure 16A

MFRCRVTVAVLLLVAYSAYAGFFDDVSGMASDVGNFFTNQFNNVKDLFAGNQSELEKNINRVK
DLLTAVKEKAKMLEPMANDAQKKTLSQVDNYLNEVQQQFGEQVSKEGSAKFEENKGKWWQML
NDIFEKGGLDGVLKLLNLKSAGHCTLVAAIIVAPVWLAFT*

Figure 16B

Figure 17A

SPLPTDASGNYVTDEGTVIEKDDEGRPLGPDGQVLPTDESGNYIYPVVGPDGSPLPTDEHK
RPIHPVLGPDGSPLPTDESGHPLGEDGQPLPTDASGVPVDKDGQPLPTDSSGHYVTVPREE
AVTKELPTDESGNVIYPVTKPDGSPLPTDASGNYVTDEGTVIEKDDEGRPLGPDGQVLPTD
ESGNYIYPVVGPDGSPLPTDEYKRPIHPVLGPDGSPLPTDESGHPLGEDGQPLPTDASGVP
VDKDGQPLPTDSSGHYVTVPREEAVTKELPTDESGNVIYPVTKPDGSPLPTDASGNFITEE
GLIIGPDGVALPYPRNRTCCLKQKMDILFAVSTTKVSKSTFDSILRAISKFADEVLDLSPD
VTRIGLVYGSKD VVVPLPLGGYQEKDHMRDEIRRIEFSDDGSQDYISLYGPAKQQFVMFPR
ADSAKIAIFLIQDEISYCLSTRTLRCGCATAVDSDCRRINNVLADDIKVCKVPETAVVPTP
VVHPQGSRAVS VVVPRFFSAPPFDTHSPSRLTLLADFATEKEPLCGEHSFLSPQKWGKNHC
TLRIPLSMPGIDHKSDDHYYYDDQTPLESEYSLDLFGKAELVRFFVQVNVERELDLAPETV
RFSSLLRSNAAYYKSPGSRPNNSNSATKRRNSPAVP*

Figure 17B

TTTTATTACCCAAGTTTGAGAGAGGCTCGTGAAGTTGGTAGAAGGCTTAC
AAGGATGAGGCTCATTTTACCACTTGTCGCCTTGATAGGTATTGGTCTCT
CAGCACATTATGAAAGGGACTGTCCATGTACGCCCCGAAAAATTGTGGCTC
GACGTAGTGGTAGGTATCGACACCTCTATTGGTATGACAGAGGAAGGAGT
GACACAGGTCCTCGCCGATTTGTCTACGGTATTCCGAGACACAAAAATCG
CTCAAGGGGAAGGGCACCATTCCCGCATTTGGAGTCGTTACATATGGGCTG
AATGCCGAAACTAGGTACAACCTTGACTGATTTCAAATCAACAGACGATAT
GCTGGAGGCGATCTGGGATATTAAGTGCAGCGACGACAAGTACTCCAATC
TCTTTGCTGGACTGACGAGGACACAAGAAATTATGAAGAATGGCCGCCAA
GGAAGACTGAGAGCAAATGTCAGATCAGCCATTATTATCTACGCGAGCGA
TTTCAGGGAAGGCGACGTGAATGACGCAGTTCAGCTGGCACATCAGATCA
AGATCGGAGGAACGGATATCATCGTAGTTGCTTTTGACCAAAAAGGAAAA
GTCAATGCGCTTGAGGGGCTCCAGAAGATTGCTTCGCCTGGTCGCCTCTT
CAAGAGCACTACGAAAAACCTAGTCGGTCTAATCCAGGATGCTTTGTGCC
AGACAAACTGCTTTTGCAAAAAGCTCTGGACGCAATACGGGGACGGATCT
GTGAAATATGGAGAATGTCTAAGGATCGGTGGAATCGACGCCAACTGGTT
AGCAGCTAAAAAAGCATGTCAGAGACTCATCCCTGGAGGTCATCTCGCCA
CTGAGCTCGACAGCTACAAGCATGACTTTATTGCACGAATGTTCAAGGAT
GACTATAGACACGAGCCTCCATACATGTATCACATCGGACTTTCCCTTCGA
CAAACAGAAGAATGATTACTTCTGGGAGCAACCCAAAGATAGGATGCCTC
TGCCGCTGAAGGACTCACCTTTCCGATATTGGAGTCGCGGTTTCCCTAAC
CCTCGGGAAAAGGATACTTGCGTACTTGCAGCTCAACAACCATACTTTC
GCCCAGATTGGCTGGCAGAACGAGCATTGCACCAAAGTTGCAAAGAGAT
ACATCTGTCAAGTGGAATCATGTGATACAGACAACCTACTGTGCCAATCTA
TAAAGTACGACAATAAACTGCTCACCTAACAAGAATAAAATATGACATC
AAAAAAAAAAAA

Figure 18A

MRLILPLVALIGIGLSAHYERDCPCTPEKLWLDVVGIDTSIGMTEEGVTQVLADLSTVF
GDTKIAQGEHHSRIGVVTYGLNAETRYNLDFKSTDDMLEAIWDIKSDDKYSNLFAGL
TRTQEIMKNRQGRRLRANVRSIIIIYASDFREGDVNDVQLAHQIKIGGTDIIIVAFDQK
GKVNALEGLQKIASPGRLEFKSTTKNLVGLIQDALCQTNCFCCKLWTQYGDGSVKYGECLR
IGGIDANWLAACKACQRLIPGGHLATELDSYKHDFIARMFKDDYRHEPPYMYHIGLSFDK
QKNDYFWEQPKDRMPLPLKDSFPRYWSRGFPNPREKDTCVLAAQTILSPEIGWQNEHCT
KVAKRYICQVESCDTDNYCANL*

Figure 18B

```
1  GGTTTAATTA  CCCAAGTTTG  AGATGAAGCT  ACTCGCTCTT  TCCGCTCTCT
51  TCGCGCTGGC  CTTCGCTGCT  CCTCGAGACA  AGCGGCTAGC  AGTGAGCACT
101 ATCACTGTCA  CCGGAGGACT  AGGTCTGTCC  ACGGGATGCG  TCGTCACTGG
151 CAACGTTCTA  TATGCAAACG  GTTTCGAGT  ACGTGAGATT  ACACCATCGG
201 AGCAGCAAGA  GTTGGTCAAA  TACCAAAACG  ACGTAGCTGA  GTACAAGACG
251 GCTCTGAAAC  AAGCAATCAA  GGAGCGTGAG  GAGAAAATCC  GAGCCCGTCT
301 CGCCGGTAAG  AAGGTGAAGG  CCGTGGAGTC  AACCAACCAA  GAGGACCTAC
351 CGAAACCGCC  ACAGAAGCCG  TCATTCTGCA  CACCAGAAGA  CACTACCCAA
401 TTCTTCTTCG  AAGGATGCAT  GATCCAGAAC  AACAAGATCT  ACGTCGGAAA
451 CACTTTCGCT  CGAGACCTGA  CTCAGCCTGA  AATCAGCGAA  TTGAAAGAAT
501 TCGAGAAGAA  ATTCAAGGTC  TACCAGGACT  ACGTACAGAA  GCAGGCCGAA
551 CAGCAAGTGA  ACAGCCTCTT  CGGCGGCTCT  GACTTCTTCT  CGGCGTTGTT
601 CAGCGGCGGT  GAGACGAGCA  AGCCATCCAC  GACCACCGTG  GCACCAGAAC
651 TTCCGGAAGA  CGTCCCGAG  CAGCCGCCCA  CGCCGAACTT  CTGCACCAGA
701 ATAATCTAAG  CCTCTAAATT  GTTCGTTTCG  CTATTGGATT  GGTGGTTTG
751 GTGAATAGCG  ATTCCGCTTC  CCCTCTCGTA  CTTACGGTGT  CGACTAGCAC
801 ATTAGTCATG  CGTTGCAATA  TTTGAACATT  GTATTGAGGT  ATATTGTACA
851 TTTATATAAT  AAAATTATTA  TCTTAAAAAA  AAAAAAAAAA  AA
```

Figure 19A

```
1  MKLLALSALF  ALAFAAPRDK  RLAVSTITVT  GGLGLSTGCV  VTGNVLYANG
51  FRVREITPSE  QQELVKYQND  VAEYKTALKQ  AIKEREKIR  ARLAGKKVKA
101 VESTNQEDLP  KPPQKPSFCT  PEDTTQFFFE  GCMIQNNKIY  VGNTFARDLT
151 QPEISELKEF  EKKFKVYQDY  VQKQAEQQVN  SLFGGSDFFS  ALFSGGETSK
201 PSTTTVAPEL  PEDAPEQPPT  PNFCTRII
```

Figure 19B

1 ggggtttaattacccaagtgtgaggatgaggggtactcctgttactgtactcttattatccatttgcgcgagcgctggctttct 80
81 AGACACTAAATTCGGCCAGAAAGATAAAGAAAACCTCTTGACAAGATTAAAGCTGTGCTTAACGGCACTGCACATCATCGCGA 160
161 TTCGTGAAAAATTCATTCGACTAAGGGGAAAAATAAAGCAAAGCTGACGCTCTCTCCAGCACGAAAGGCTATATTGGAC 240
241 GAAGTTATGAAGCATATCAAAATGATCAAAAAGGATAAGATTCAAGAGAAAGGGCGACTCAATCGATGAAATCAATGAAAA 320
321 GAGTGCAATCGGACAGTTGCTGTACCAAGGTGACATCGTTCTTGACAGAAAAAGCAAGCCAGCAAAATTACCGAAGACATTG 400
401 AAAATGACAAAAGGGACCGCGAAAAACGACAGGCGTTCCGTGATCGCAATTATCCGGAAACATTATGGTCGAAGGGAGTG 480
481 TACTTTCACCTTTCATAGGAACGCAACTCCTGAAGTTAGAAGCGTTTGTGAAAAGGCGCAAAACCTTTGGATGAAGGATAC 560
561 TTGCATCGACTTCTTCGAAAGCAACTCAGCGCCTGATAGGATTCTGTGTGTTCAAAGAGAACGGATGTTGGTCGTACGTTG 640
641 GTAGGCTGGGCGGTGAACAAGATCTGTCACTGGGAGAAAGGTTGTCAATCGGTTGGCACAGCTGCGCACGAAATTTGGCCAC 720
721 GCTATTGGCTTCTACCACTCACGCAAGACATGATCGCGATAACTTTATTACATTCAACGCACAAAAATGTCAAGCCCGA 800
801 TTGGTTGGACCAATTCACTCTTCAGACTCCGGCAACGAATGAGAACTATGGAATAACTTACGACTATGGAAGTATCATGC 880
881 ATTATGGTGCAAAATAGCGCCTCGCAGAACGGACGTCCTACAATGGTTCCGCATGATCCCCAATACGTAGAAAACTCTTGGGA 960
961 TCACCCATAAATTTCCCTTCTATGAGCTTCTCATGATCAACAAACACTACGACTGCACATAAGAACTGTGACCCGGCTACTTC 1040
1041 TGCGCAGTGTAAAGATGGGTGGCTTCCCACATCCTCGGGATTGTACAAGATGCATTTGCCCTAGTGGATATGGAGGCAAAAC 1120
1121 TGTGCGACCAAGAACCCAGCCGGATCGGATCTATATACCAAGGCCACCAATCAGTACCAGACCTTGCACGACGAAATTGGA 1200
1201 GACAAGAGAGCGGGACAGAGACCTAGAGAAAGACATGGACTTCTGCTATTATTGGATCACGGCCCCAAAAGGTTCAAAAAAT 1280
1281 CGAAATCAAAATTGCTGGATTATCACAAAGAGCCGCTGTTGAAGGATGCCAGTACTGGGGAGTAGAAATCAAGACTCATG 1360
1361 CCGATCAACGCTTTACCGGCTACAGGTTCTGCGCACCAAGAAGATGTTGGAGTTAGATTAGTGTGCAACTTCAACATCGTA 1440
1441 CCAATAATCACATACAACATATTCTACGCGACCTATGTCGATATTCAAGTACCGTATCGTTGGTGATAATGTTGGCGGTCC 1520
1521 TATGCCTCAGCCACAACCAAAATAGCAATTGTGTCGACAATGAACAGTGTGCGACACTCGTGAGAACAAAGAACTTCTGTGTC 1600
1601 AGAGCAGATTTTTCACAGAGTCCGTCAAAAGAGGTCATGTGCCAAAGTCCAGCGGTTTCTGTGCGCTAAacttttcagcaaa 1680
1681 caatggaataaatgttgaccataaaaaaaaaaaaaa 1722

Mtp 5-1 →
← Mtp 3-1

Figure 20A

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M R V L L L L L L S I C A S A G F L
D T K F G Q K I K K T L D K I K A V L N G T A L I A
I R E K F I R L R E K I K A K L T L S P A R K A I L D
E V M K H I K M I K K D K I Q E K G D S I D E I N E K
S A I G Q L L Y Q G D I V L T E K Q A Q Q I T E D I
E N D K G D R E K R Q A F R D R N Y P R T L W S K G V
Y F H F H R N A T P E V R S V F V K G A K L W M K D T
C I D F F E S N S A P D R I R V F K E N G C W S Y V
G R L G G E Q D L S L G E G C Q S V G T A A H E I G H
A I G F Y H T H A R H D R D N F I T F N A Q N V K P D
W L D Q F T L Q T P A T N E N Y G I T Y D Y G S I M
H Y G A N S A S Q N G R P T M V P H D P K Y V E T L G
Mtp 5-1 →
S P I I S F Y E L L M I N K H Y D C T K N C D P A T S
A Q C K M G G F P H P R D C T R C I C P S G Y G G K
L C D Q K P A G C G S I Y Q A T N Q Y Q T L H D E I G
D K R A G Q R P R E D M D F C Y Y W I T A P K G S K I
E I K I A G L S Q G A A V E G C Q Y W G V E I K T H
← Mtp 3-1
A D Q R L T G Y R F C A P E D V G V R L V S N F N I V
P I I T Y N I F Y A T Y V D I Q Y R I V G D N V G G P
M P Q P Q P N S N C V D N E Q C A T L V R T K N F C
Q S R F F T E S V K R G L C P K S S G F C R *

Figure 20B

TTTAATTACCCAAGTTTGAGCAATGAAATACCTTTGTTCTCTGCTTCTGCGCCTTCTTCGTGGTCAATGCTGATGA
GGAAGACGATCTACCCCGCAATCCTTTGTGGACGCTTACAAGGATGACAAATGGCAAAATATGTGATTCGGTACGT
CATTAAACGGAAGTTATGGAGAGGAGAAAAAGTTTATTTGAAATGATGGACGAAATCGATAAGAAATACCTGCGT
CCGCTTCATACCCAGATCGACAGAGCAGGATTATATCGAAATCGTAAACAGACTAGGAGAAAGGAACCGGCGCTGT
TGTAGGTAAACCTGGAGGAAAAAGCATCGTGTGTTGGAATCGAGCAAAATTCATAATGATCCAACTCCTTGGGCC
TGTAATGCAGACTTTGATGAAAAATCATTGGCTTACCACCTGAACACATTCGACCAGAGAGGAAAGATCATATCAA
GATACACTGGGAGAACATCGAGAAAAGGTTACGAAAGCTTCTTCGCCCTCTCTCTGTAAAGCCCGATCCGTACGG
AATACCATATGATTACTACTCCATCATGCATCAAGAAAGGACGCCCTTTCGCAAGCCGGGCACGATCACAATGGA
AACTTTGGATAAGCGCTACCAGGATATCATTTGGGAATCAAGAGAAGCCGTCGAAGTTGGATTACAAGAAAGATCTG
CACCAAGTATAAATGCGATATCTGCATGGGTGAGAAAGATGAAGTATTAAGAAAGGAATGACGTTAACATAAAGGA
ATGGTTGCCGATTTCAACAAAAACGAACGTCATAATACATCTGGTGTGTTTCCTCATGTGTAGAAAATCCAATAAAGCA
TTTCACCGAAAAAATAAAAAAAAAA

Figure 21A

MKYFVLCFAFFVNADEEDDLPRNPLWDAYKDDNGKYVIPYVINGSYGEEKKVLFEEMMDEIDKNTCVRF
IPRSTEQDYIEIVNRLGEGTGAVVGKPGKSIVLLESSKILNDPTPAPVMQTLMKIIGLPPPEHIRPERKD
HIKIHWENIEKGYEAFALSSVKPDPYGIPIDYYSIMHYKKDAFAKPGTITMETLDKRYQDIIGNQEKPS
KLDYKKICTKYKCDICMGEKMKY*

Figure 21B

TTAATTACCCAAAGTTTGTAGAAATGGCAACTATGCTCGCGGTATGTCTGTTGGTCGTCTTCCTCACCCGCCG
TTCACACGGTGTAGCAAGGGGAAGACCCATCAACATTTTCGAGCAAAAAGGAAGAGAGACATCACAC
AGCTGAGAGAAAAAGGAGCGCAATGTTCAACGCCCTTCACAGAACGTCGAGTCTGAAGTGAACAAGA
GGGATTAGACGGGAATTTTGTATACCGTACATAATTACAGGACGCTATGACCGAACGGAGCGGGGAA
TATCAAGGAAGCAATGAGGCGCATCGAGGCAATACTCGTATTTCGTTTCAAGCAAAAGAGACTATGAGAG
AGACTATATCGAGATCCAGAACAAAGCTGGACATGGATGTTACACCAATGTCTGGTCTGTCGCTGCGAG
AAGTATACTGATGCTCGAGTCCAGCTTCGAGGAAACATGTCATGGAGACAGAAATCGTCTGCACGAGTT
GATGACGTTGTCGGTCTGTGGCACGAACACATGCGCCACGATCGTGACAAATACATCAAAGTGCACATA
CGAGAACATCGAAAGGAGTTACTGGAACCAATTTCGAGAAAGTCTCACCGATGGAAGCTACCACGTATAA
CGTACCGTATGACTACAAATCCGTCTGCTACGACTACGAGAAAGTCTGCGCATTCGCCAGACCTGGACGAATCAG
CATGGAACCGCTTGATCCCAAATATCAGAACGTCATCGGACACCCAGAGGACGCCCTCTCCCAGTACTA
CCGTAAGATCTGCGAGATATACCAAGTGAAGTGCATGAACGGCAAGATCGAGATCGGAGGCGACTC
GGACTCCAAACCCGAAACCGCAACCGAGGCCCCAGTACCATCAGACCGGCCAGAAATCAACGGAGA
ATGCCGCGATATGATCCCGTCTTCTGCCGAGCGTTGGCCCGCTCGCACATGATCGACTGCAGCTTCTT
CCATAAACAAATGCTGTGCAACCTGCGCCGAGTTAGGACACAGGATCAGGACCGAGGATGGTT
AGAACAAACAGGATGGCCATTTCGACGGGCTCTTCCGAATATTCGGACAAGGAGGTGGCCTTTTACCTT
CTTCAATCGCTGGTAACTAATACAGGTCAAAATAAATATTGCAAAATAAAAAA

Figure 22A

MATMLAVCRLVVFLTAVHTVSARGRPINIFEQKEGGDITQLREKGSAMFNALHRTSSLKWNKR
DSDGNFVIPYIITGRYDRTERGTIKEAMRRIEANTCIRFKQDYERDYIEIQNKAGHGCTNV
GRVGGRSILMLESSFEETCMETEIVLHELMHVVLWHEHMRHRRDKYIKVHYENIERSYWNQF
EKVSPMEATTYNVPDYKSMHYEKSAFARPGRISMETLDPKYQNVIGHQKDAASPSDYRKICE
IYQCKKCMNGKIEIGGSDSNPKPPTAPVTIRPAPEINGECRDMIPFCRALARSHMIDCSF
FHKQCCCATCAELGHRDQDQGGWLEQTGWPFGLFRIFGQGGWPPTFFFNW*

Figure 22B

CAAGTTTGAGCATGCTTCGACTAGCTCTCTTCGCGGTCCTCTTCGCTTGCGCATTTTCAG
CACCCAACGTTGAAGTGAACAAATTTCGAGGATATTCCCTGAGCAGTACAGAGAACTGATCC
CCAAGGAGGTAGCCGACCACATCAAGGCTATCACTGAGGAGGAGAAGACCATCTTGAAGG
AGGTGCTGAAGGACTACGCCAAATACAAGGACGAGAATGAGTATTTGGCAGCGCTGAAGG
AAAAGTCACCCAGCCTGCACGAGAAGGCAAAGAAGTTCCACGACTTCATTAAGGCTAAGG
TCGACGCACTTGGGGATGAAGCAAAGGCGTTCGTGAAGAAAGTGATTGCTGCTGCTCGCA
AACTGCACGCAGAGCTCCTTGCCGGAACAAACCTTCTCTTGAGGAACTGAAGAACTG
TCAAGAAATACGTGGCCGAATTCGACGCGCTGACCGCAGCCGCAAAAGAAGATCTCAAGA
AGCACTTCCCCATCCTCACTTCCATTTTTCACCAACGAGAAGGCAAAGGCGTTGATGGACA
AGCACTTGCCGAAGTAGGTGAAGCAGCAGTTGTTTTTAGTCGAATAAATGTTTCAACTTT
TTAAAAAAAAAAAAAAAAAAAAA

Figure 23A

MLRLALFAVLFACAFSAFNVEVNKFEDIPEQYRELIPKEVADHIKAITEEEKTILKEVL
KDYAKYKDENEYLAALKEKSPSLHEKAKKFHDFIKAKVDALGDEAKAFVKKVIAAARKL
HAELLAGNKPSLEELKNTVKKYVAEFDALTAALKEDLKKHFPILTSIFTNEKAKALMDK
HLPN*

Figure 23B

```
1  GGCACCTTCGA CATGAAGGTC CTTGCCTTAG TGTTACTTTG GGCTGCAACA
51  GCCACTGCTC TGCTAGACAT ATGTAAGGAG GAAATCAAGA CTGGAAATTG
101 TAGGGGGGCC TTCCGCAAGT TTGGCTACGA TCGATGCACG AATAAATGTA
151 TTCCGTACAC GTATGGAGGC TGTGGAGGGT CGAGCAACAT GTTCGACACT
201 TTGGAAGAAT GCCAAGAAAA ATGTGGCAAG CCCGAGGACC GCTGCTCAAA
251 ACCACTGGAA AGAGGAATAT GTCTGGCATC AATGAAAAGA TATGGCTACG
301 ATACAAGCAG TAAGAAGTGT AAGGCCTTCA TCTATGGCGG ATGTGGCGGT
351 AACGAGAACA ATTTGAGAC AATGGCTGAG TGCCGAGAAA CTTGCAAGGA
401 CACCTCTTCT GAAGAAGAAT CAGTACCTGA TGCATGCCTA TTGCCATCAG
451 AAGTGGGGCC ATGTAAAGGA AAAGAACGTC GCTTCTACTT TGATCAAAAA
501 CGTGGCAACT GCAAGTCGTT CTTCTTCGGC GGTGTGGTG GAAATGGAAA
551 TAATTTTCATG ACCAAAGCCA AATGCATGGA AACCTGCTCG AAACACATCA
601 AACCTGAAAC AGAGCAAGAC GTCTGCTCAC AGCCAATTAA AGCTGGACCT
651 TGCATGGCAA TGTGAAAAG ATATGCGTAC GACAACAAGA AAAAGAGGTG
701 CGTGCAGTTT ATCTATGGAG GATGTAAGGG AAACAAGAAC AACTTCGAGA
751 GCATGGAAGA GTGCACCCGG ACATGTAAGA AAGCAGTACC AGAGCCTGAG
801 CAGGACACCT GCTCACAGCC CATTGAAGTT GGACCTTGCA AGGCAATGTT
851 GAAAAGATAT GCGTACGACA ACAAGAAAAA TAAGTGCGTA CGGTTTATCT
901 ATGGAGGATG TAAGGGAAAC AAGAACAAC TCGAAAGCAT GGAAGAGTGC
951 ACCCGGACAT GTAAGAAAGC AGTACCAGAG CCTGAGCAAG ACACCTGCTC
1001 ACAGCCCATT GAAGTTGGAC CTTGCAAGGC AATGTTGAAA AGATATGCGT
1051 ACGACAACAA GAAAAATAAG TGCGTGCGGT TTATCTATGG AGGATGTAAG
1101 GGAAATAAGA ACAACTTCGA AAGCATGGAA GAGTGCACCC GGACATGCAA
1151 GAAAGCAGTA CCAGAGCCTG AACCTGAGAA AGAGACCTGC TCACAGCCCA
1201 TTGAAGTTGG ACCTTGCAAG GCAATGTTGA AAAGATATGC GTACGACAAC
1251 AAGAAAAATA AGTGCGTACG GTTTATCTAT GGAGGATGTA AGGGAAACAA
1301 GAACAACCTC GAAAGCATGG AAGAGTGCAC CCGGACATGT AAGAAAGCAG
1351 TACCAGAGCC TGAGCAAGAC ACCTGCTCAC AGCCCATTGA AGTTGGACCT
1401 TGCAAGGCAA TGTTGAAAAG ATATGCGTAC GACAACAAGA AAAATAAGTG
1451 CGTGCGGTTT ATCTATGGAG GATGTAAGGG AAATAAGAAC AACTTCGAAA
```

Figure 24A

1501 GCATGGAAGA GTGCACCCGG ACATGCAAGA AAGCAGTACC AGAGCCTGAA
1551 CCTGAGAAAG AGACCTGCTC TCAGCCCATT GAAGCTGGTC CTTGCAAGGC
1601 AATGGTGAGA CGATTTGCTT ACGACAACGC AAAGGAAAAG TGCCTAGAGT
1651 TCTTTTACGG CGGATGCAAA GGAAACAAGA ACAACTTCGA AACCATGGAA
1701 GATTGTACTT TTACGTGTGA GCAACGGCTG GCAAAGCCCG AGCTTGAGAA
1751 GGATGTGTGT TCACAACCTA TCACGGCTGG TCCTTGACAGA GCATCAATAC
1801 CGCGATACGG CTATGATTCT AAAAAACGAA AGTGTGTGAA GTTCACCTAC
1851 GGAGGATGCA AAGGAAATGG TAATAGGTTC CCGACGAAGA ATGAATGTGA
1901 GAAGACATGC AAGAGAGGAG CAACTGGAAC TACGAATCCA GGAGGTGAAA
1951 ATGATAAATG CTTGCTGCCA ATTGTTACCG GCCCATGCAA AGGAAAAAAT
2001 CGTCGCTATG CTTACAACAA CAAGACAGGA AAATGCGTGA GATTACCTA
2051 TGGTGGTTGC GGGGGAAACG AGAACAACCT CAAGACTAAG AAAGACTGCC
2101 AGGATGCGTG CGAAAACATA AATGCAGCTA GTCCATGCAC CCTTCCTATC
2151 GACAAAGGAG AAGGCGACTT GAATCTGACC AGATATGGCT TCAAAAATGG
2201 CAAGTGTGTC GCGTTCAAAT ACGGCGGACG ACGGGGAAAT CTCAACAATT
2251 TTGGAAGCAA AGCCGATTGC AAAGAAGCCT GCCTCAAGTA ACTACGAAGC
2301 TCCGCTGCAA ATCCCAGAAG ATCATTCGGT TGTCTCTGCC GTCTATGAAA
2351 CAATAAAGTA TTAATTTTGT TAAAAAATAA AAAA

Figure 24B

1 MKVLALVLLW AATATALLDI CKEEIKTGNC RGAFRKFGYD RCTNKCIPYT
51 YGGCGGSSNM FDTLEECQEK CGKPEDRCSK PLERGICLAS MKRYGYDTSS
101 KKCKAFIYGG CGGNENNFET MAECRETCKD TSSEESVPD ACLLPSEVGP
151 CKGKERRFYF DQKRGNCKSF FFGGCGGNGN NFMTKAKCME TCSKHIKPET
201 EQDVCSQPIK AGPCMAMLR YAYDNKKRC VQFIYGGCKG NKNNFESMEE
251 CTRTCKKAVP EPEQDTCSQP IEVGPCAMLR KRYAYDNKKN KCVRFIYGGC
301 KGNKNNFESM EECTRTCKKA VPEPEQDTCS QPIEVGPCKA MLKRYAYDNK
351 KNKCVRFIYG GCKGNKNNFE SMEECTRTCK KAVPEPEPEK ETCSQPIEVG
401 PCKAMLRKYA YDNKKNKCVR FIYGGCKGNK NNFESMEECT RTCKKAVPEP
451 EQDTCSQPIE VGPCAMLR YAYDNKKNKC VRFIYGGCKG NKNNFESMEE
501 CTRTCKKAVP EPEPEKETCS QPIEAGPCKA MVRRFAYDNA KEKCVFFYF
551 GCKGNKNNFE TMEDCTFTCE QRLAKPELEK DVCSQPITAG PCRASIPRYG
601 YDSKKRKCVK FTYGGCKGNG NRPFTKNECE KTCKRGATGT TNPGGENDKC
651 LLPIVTGPCK GKNRRYAYNN KTGKCVRFTY GGCGGNENNF KTKKDCQDAC
701 ENINAASPCT LPIDKGEDL NLTRYGFKNG KCVAFKYGGR RGNLNNFGSK
751 ADCKEACLK*

Figure 24C

ctcgcaactat ttaccctagc tgtagctagc gtacacagaa ggacattcca ccacccgcgc
cgctatgtga agtcggtgtc gctttcgcgt caaccaacac ttcgtgaacg attgctcgga
actggcagtt gggagacta tcagaaacag cgttaccact accagaagaa acttctggca
aagtatgcgg cgatcaaagc gacaaaactg cagtctacca atgaaattga cgagcttctt
cgcaactaca tggatgcgca atacttcggc accatccaaa tcggaactcc agcgcagaat
ttcacagtga ttttcgacac cggttcttcc aatctgtggg tgccgtccga gaaaatgcc
ttccacgaca tcgcgtgcat gcttcgtcac cgttatgact ccggagcatt gtcgacgtac
aaggaggatg gacgaaagat ggccatccag tatggcactg gctcaatgaa gggcttcatt
tcaaaggata atgtctgcat cgctggaatt tgcgctgaag agcaaccggt tgctgaggca
acgagcgagc caggcctcac cttcatcgca gcgaagtttg atggaatcct tggcataacc
ttccctgaaa tctctgtgct cggagtaccg ccagtatcc acacgttcat tgaacagaag
aaagtgccga gcccggtgtt cgctctctgg ctcaacagaa atcctgactc ggaactcgga
ggtgagatca cctcgggtgg aatggacacc cgacgatacg ttgagccgat cacatggact
ccagtgacaa ggcgagggta ctggcagttc aagatggaca aggttcaagg aggatcaaca
tccattgctt gcccgaatga attttctgga tgccaggcta ttgctgacac tggcacttcc
ctcattgctg gacctaaagc acagtcgagg gcatccagaa attcattggt gcttgagcca
acttatgaag gagagtacat gattccttgc gacaaggtgc ctttccctcc ccgattatcc
ttcgttatcg aagcccgac tttaccctc aagggtgagg attacgtctt gaccgtgaaa
gctggtggtg aatcgatttg cctgtccggt ttcattggaa tggacttccc agagaggatc
ggagagttgt ggattcttgg ggacgttttt attggaaagt actacaccgt cttcgatggt
ggccaggccc gtcttggatt cgctcaagct aagtcagaag atggctatcc ggttggccct
gctgttcgaa ggtacaacaa gttctcggag gacagcggca gtgatgagga tgatgtattc
actctataag taacatgtat ccacaacttg ctctaactct gatacgtgta ccgtgtctaa
cgtgcttcca cctttgataa actgattaat ctc

Figure 25A

LALFTLAVASVHRRRTFHHPRRYVKSLSRQPTLRERLLGTGSW
EDYQKQRYHYQKKLLAKYAAIKATKLQSTNEIDELLRNYMDAQYFGTIQIGTPAQNFT
VIFDTGSSNLWVPSEKMPFHDIACMLRHRYSYGASSTYKEDGRKMAIQYGTGSMKGF
SKDNVCIAGICAEEQPFAEATSEPGLTFIAAKFDGILGITFPEISVLGVPPVFHTFIE
QKKVPSPVFALWLNRPDSELGGEITLGGMDTRRYVEPITWTPVTRRGYWQFKMDKVQ
GGSTSIACPNEFSGCQAIADTGTSLIAGPKAQSRSRNSLVLEPTYEGEYMI PCDKVP
FPPRLSFVIEARTFTLKGEDYVLTVKAGGKSICLSGFMGMDFPERIGELWILGDVFIG
KYYTVFDVGQARLGAQAKSEDGYPVGPAVRRYNKFSSEDSGSDEDDVFTL

Figure 25B

TTGACACAGGTTTCATCAAAATCTCTGGNGCTCCTGCATATTTATGTGGAGGAAAATCGTTTCGAACCTGACCG
CAACGTACAACAAGGAACATGACCTCTACTACATCGACTGCAGAGCCCAATGGGTCTATCACGCTCACAAATT
GGCCAGCGCCAGTACAAAATTGAATCAAAGAACCTCATCATTTGATGTCGAAGCAGATACATGCATCTTGG
CACTACATGGATACCACTTTCTCGGAGCAACATGGATCTTTGGTGCACCGTTCAATAGGCAGTTCTGTAA
TATTTATGATATGGGTAAACAAAAAGGATAGGATTCGCTCATTCGCTGCAGAAATTAGCCTGCATTTACTAGT
TNTTATTCGACATTNTTAAACAACTCCCTCAATAAAGTATTGNGTTTCAAAAAAANAAAAA

Figure 26A

LTQVHQISGAPAYYVEEIASNLTATYNKEHDLYYIDCRANASITLTIGQRQYKIE
SKNLI IHVEADTCILALHGYHFLGATWIFGAPFIRQFCNIYDMGNKRIGFAHSLQN*

Figure 26B

1 aaggcgtatc cggaatgcgg ggagaatgag tggctcgacg actgtggaac tcagaagcca
61 tgcgaggcca agtgcaatga ggaacccctt gaggaggaaag atccgatatg ccgctcacgt
121 ggttggtttat tacctcctgc ttgcgtatgc aaagacggat tctacagaga caccgtgatc
181 ggcgactgtg ttagggaaga agaatgcgac caacatgaga ttatacatgt ctgaacgaga
241 aagcaacaat aaccaaagggt tccaactctc gctctgcaaa atcgctagtt ggatgtctct
301 ttgctgtccg aatagtttta gttgatatta agtaagaact cctgctggaa agaataaagc
361 ttccaactc c

Figure 27A

KAYPECGENEWLDDCGTQKPCAEAKCNEEPPEEDPICRSRGCLL
PPACVCKDGFYRDTVIGDCVREEECDQHEIIHV

Figure 27B

GTTTTCTCCTGTAGTCGTCATCAGTGTGGTACTCACAGTCGCCTTTTGCGATGCAAGC
CCAGTGAAAGCCAGCTTTGGCTGCTCTAACAGTGGGATAACTGATAGCGATCGGCA
AGCGTTCCCTCGACTTCCACAACAATGCTCGGAGACGAGTTGCGCAAGGAGTTGAGG
ATAACAAATCCGGCAAACCTGAATCCAGCGAAGAACATGTATAAGCTGGACTGGGAC
TGTGAGATGGAACAGAAGCTCCAGGATGCTATCCAATCCTGCCCAGGCGGCTTTGCT
GGAATTCAAGGTGTTGCGCAGAATATAATAAGCTGGTCAGGCTCCGGTGGATTCCCG
AATCCATCAGAAAAGATAAACTCAACACTTGCCAGCTGGTGGGGTGGTGCAAAAAA
CAACGGCGTCGCCTCAGACAACAAATACACTGGTGGAGGTCTTTACGCCTTTTCCAA
TATGGTCTTCTCTGAGACGACAAAACCTCGGTGCGCCTACAAGGTTTGCGGCACTAA
ACTGACGCTATCGTGCATTTATAACGGAATTGGGTATATGACAGGCGCGCCAATGTG
GGAGACAGGTGAGGCTTGCAAGGCCGAGCAGACTGCACCACATTCAAGAACTCAG
GTTGCGAAGACGGCCTCTGCACGAAAGGAGCAGATGTCCCTGAGACGAACCAGCAG
TGTCCTCGTCAAACACCGGAATGACTGATTCAGTCAGAGATACTTTCCCTTTCATTGCAC
AACGAATTCAGGTGAGTGTTGCCCCGAGGTTTGAACCCGATGCTCTTGGCGGAAAT
GCACCAAAGCATCCAAAATGCTCAAGATGGTGTACGACTGTGAAGTAGAAGCATC
AGCCATCAGACATGGGAATAAATGCGTCTACCAACATTCTCACGGCGATGAAAGAC
CCGGCCTAGGAGAAAACATTTACAAAACCAGCATTGTCAAATTTGAGAAGAACAAA
GCAGCCAAGCAGGCTTCACAACCTTTGGTGGAACGAGTTGAAAGAGTTCGGTGTGCG
CCCATCCAACATGCTCACTGATGCTCTCTGGAACAGGCCCAACATGCAGATTGGTCA
TTACACCCAGATGGCCTGGGAGAGCACCTACAACTTGGATGCGCTGTTATATTCTG
CAATGATTTACATTTGGTGTGTTGTGAGTATGGACCAGGAGGCAATTACATGAATCA
CCTGATCTACACTATTGGTCAACCATGTTCCGAGTGTGAAGCTACCGCCACTTGCAG
CGTGACCGAAGGATTGTGAGTGCTCCTTAATTAGTCTACAATAAAGATGCTACTTT
CCAAAAA

Figure 28A

FSPVVVISVVLTVAFCDASPVKASFGCSNSGITDSDRQAFLEDFHNNARRRVAQGVEDNK
SGKLNPAKNMYKLDWDCEMEQLQDAIQSCPGGFAGIQGVAQNIISWSGSGGFPNPSEK
INSTLASWWGGAKNNGVASDNKYTGGLYAFSNMVFSETTKLGCAVKVCGTKLTLSC
YNGIGYMTGAPMWETGQACKAGADCTTFKNSGCEGLCTKGADVPETNQCPSTNMG
TDSVRDTFLSLHNEFRSSVARGLEPDALGGNAPKASKMLKMVYDCEVEASAIRHGKNC
VYQSHGDERPGLGENIYKTSIVKFEKNKAAQASQLWWNELKEFGVGPSNMLTDAW
NRPNMQIGHYTQMAWESTYKLGCAVIFCNDFTFGVCQYGPNGNYMNHLYTIGQPCSE
CEATATCSVTEGLCSAP*

Figure 28B

GTTCTCGTACCACTTCTGGTTCTACTGGCTGTTTCTGTTGATGCAAATTCCGTGAGAT
GCGGAAATAATGGAATGACCGACGAGGCCCGACAGAAATTCCTCGACATGCACAAC
GGTTACAGATCGCAGGTTGCCAAAGGACAGGCCAAGGATGCACTCTCAGGAAATGC
ACCAAAAGCTGCCAAAATGAAGAAAATGGTATATGACTGTGGtGTCgAATCAACTGC
AATGCAGgAATGCTAAAAAATGtGTCTTCACTCATTTCGCATATGAAGGGACTTGGCGA
AAACATATGGATGACgACTGCACgCgAGATGGATAAAGTGAAATCAGCTGAACAGGC
TAGTCAGGGTTGGTTCAGTGAACCTCGCGGAATACGGTGTAGGGCCTGAAAATAAGC
TAACAATGCAGCTGTGGAACAGGCCAAATACTCAGATTGGACATTACACGCAGATG
GTCTGGCAGGACACCTACAAACTCGGATGTTATGTGGAATGGTGTCTCATCTATGACC
TACGGCGTGTGTCAGTATAGCCCTCAAGGTAACATGATGAACTCAATCATCTACGAA
AAAGGAAACCCCTGCACTCAGGATTCGGACTGTGGCTCAAATGCCAGATGCACcGCT
GACAAGGCGCTTTGCATCGTGCATGGATAgCTGGGCTATCCCACGGTCAACAGCGCT
TCTACTAATTAGCTTTGCTTCCTCTATAAATAAATGCATTGAAACAAAAAAAAAAAA
AA

Figure 29A

VLVPLLVLAVSVDANSVRCGNNGMTDEARQKFLDMHNGYRSQVAKGQAKDALSGN
APKAAKMKKMVYDCGVESTAMQNAKKCVFTHSHMKGLGENIWMTTAREMDKVKSA
EQASQGWFSELAJEYGVGPENKLTMLWNRPNQTQIGHYTQMVWQDTYKLGCVVEWCS
SMTYGVCQYSPQGNMMNSIIYEKGNPCTQSDCGSNARCTADKALCIVHG*

Figure 29B

GTTTGAGGATGAGGGTATTCCCTTTTAGTCCTCTTGTTGGCTATTTGTGCGAGCGCTGG
TTTCTTTGACACCAAGCTTGGTGAGAAAATAAAGAAAACGCTTGGCAAAATCAAAG
CTGCGCTCAACGGCACCTTACTCATGAAAATTCGTGAAAAATTCATTGCACTGAGAG
AAAAAATAAAGGCTAAGCTGAAGCTCTCCCCGGCACGAAAAGCCCTACTAGGCGAA
ATTATGAAGCACATTATTAATAAATCAAAAAGGATAAAATTCAAGAGAAAGGTGACTC
AATCGAAGAAATCAACTCGAAAAGTGCTATCGGAGAGTTGCTGTACCAAGGTGACA
TCGTTCTGACAAATAAGCAAGCCCAGGAGATTGTTGATGACATTGAGGGTGATGAA
AATGACCGCGGAAAACGACAGGCGTTCCGTGATCGCAACTATCCACGGACATTATG
GTCGAAGGGAGTGTATTATTACTTCCATGGAAACGCAACTCCTGAGGTGAGAAGCGT
TTTCACGAAAGGCGCAAGACTTTGGATGAAAGATACTTGCAATTGACTTCTTTGAGAG
CAACTCAGCACCCGATAGGATTTCGAGTTTTCAAAGAACAAGGATGTTGGTCGTACGT
TGGTAGGATCGGGGGTCAGCAAGATCTGTGCTGGGAAAAGGCTGTGAATCGGTTG
GAACAGCTGCACACGAAATCGGTCATGCTATTGGCTTCTACCACACTCACTCAAGAC
ACGATCGCGATAACTTCATCACATTTAACGCACAAAATGTCAAGCCTGATTGGTTGG
ACCAATTCACCAAGCAGACCCCGGCTACTAATGAGAACTACGGAATTACATACGAC
TACGGAAGTATTATGCACTATGGCGCAAATAGCGCCTCTGCGAATGGACAGCCTTCA
ATGGTTCCGTTTGACCCGAAATACGTAGAACTCTCGGATCACCCATAATTTCTTTTT
ATGAACTTCTCATGATCAACAAACCCTACGAGTGCACCAAGAATTGCGATCCGAATA
CTTCTGCGCAGTGTAAGATGGGTGGCTTCCACATCCTCGGGATTGTGGAAGATGCA
TTTGTCCCAGTGGATATGGAGGCCAACTATGCGACCAGAAGCCATCCGGATGCGGA
TCGATCCTCCAAGCGACCGCTCAGTACCAGAACTTGCACGACAAACGTGGAAACGA
AGCAGCAGGGCAGAGACCTAGAGAAGACATGGACTTCTGCTACTACTGGATTACGG
CTCCACAGGGTTCAAGAATCGAAATCAAAATCGCTGATCTATCTCGAGGAGCCGCTG
TTGATGGGTGTCAGTATTGGGGAGTAGAAATTAAGACTCACGCTGACCAGCGCCTCA
CTGGCTACAGGTTCTGTGCTCCAGAAGATGTCGGACGTACATTGGTGTCGAACTCTA
ACATCGTACCAATAATCACATACAATAGATTTTTATGCAACCACTGTTGATATCCAGT
ACCGAATCGTTGGTGGTAATGTTGGCGGACCAAGGCCTCAGCCACAACCAACAGC
AATTGCGTCGACAATGAACAGTGCGCGACCCTCATCAGAACAAAGAATTTCTGTCA
GAGCAGATCGTTCACAGAGTCCGTCAAAAGAGGTCTATGTCCAAAGGCATGCGGTT
TTTGCCGCTAACTTTTCACGAGACAATGAAATAAATATTCGCAGCATCAAAAAAAAA
AAAAAA

Figure 30A

MRVFLLVLLLAICASAGFFDTKLGEKIKKTLGKIKAAALNGTLLMKIREKFIALREKIKAKL
KLSPARKALLGEIMKHI IKIKKDKIQEKGDSIEEINSKSAIGELLYQGDIVLTNKQAQEIVDI
EGDENDRGKRQAFRDRNYPRTLWSKGVYYYFHHGNATPEVRSVFTKGARLWMKDTCID
FFESNSAPDRIRVFKEQGCWSYVGRIGGQQDLSLGKGCESVGTAHEIGHAIGFYHHSR
HDRDNFIFNAQNVKPDWLDQFTKQTPATNENYGITYDYGSIMHYGANSASANGQPSM
VPFDPKYVETLGSPIISFYELLMINKPYECTKNCDPNTSAQCKMGGFPHPRDCGRCICPSG
YGGQLCDQKPSGCGSILQATAQYQNLHDKRGNEAAGQRPREDMDFCYWITAPQGSRI
EIKIADLSRGA AVDGCQYWGVEIKTHADQRLTGYRFCAPEDVGRTLVSNSNIVPIITYNF
YATTVDIQYRIVGGNVGGPRPQPQPNNSNCVDNEQCATLIRTKNFCQSRSFTESVKRGLCP
KACGFCR*

Figure 30B

1 GGTTTAATTA CCCAAGTTTG AGATGAAGCT ACTCGCTCTT TCCGCTCTCT
51 GCGCGCTGGC CTTCGCTGCT CCGCGAGACA AGCGGCTAGC TGTGAGCACT
101 ATCACTGTCA CTGGAGGACT AGGTCTCTCC ACGGGATGTG TCGTCACTGG
151 CAACGTTTTG TATGCAAATG GTTTCGAGT ACGCGAAATT AATCCATCGG
201 AGCAGCAAGA GTTGGTCAAG TATCAGAACG ACGTAGCCGA ATATAAGACG
251 GCCCTGAAAC AAGCGATCAA GGAGCGAGAA GAGAAGATCC GAGCCCGTCT
301 CGCCGGCAAG AAGGTGAAGG CCGTTGAGTC GACCAAAGAA GAGGACCTGC
351 CGAAGCCGCC ACAGAAGCCG TCATTCTGCA CACCAGAAGA CACTACCCAG
401 TTCTTCTTTG AAGGATGCAT GATCCAGAAC AACAAGATCT ACGTCGAAAA
451 CACTTTCGCT CGTGACCTGA CCCAATCTGA AATCGGCGAA CTGAAGGAAT
501 TCGAGAAGAA ATTCAAGGTC TACCAGGACT ACGTTCAGAA GCAGGCCGAA
551 CAGCAAGTGA ACAGCCTCTT CGGCGGCTCT GACTTCTTCT CGGCACTGTT
601 CAGCGGCGGT GAGACCAAGC CATCCACGAC CACTGTGGCA CCAGAACTTC
651 CTGAAGACGC TCCCGAGCAG CCGCCCACGC CCAACTTCTG CACCAGAATA
701 ATCTAAACGT GCTCTGAATT GTCCACTTAG TTGTTGGATT GGTGTTTGT
751 GTGAATAGCG ACTTCGCTTC CCCTCTCGTA CTTACGGTGT CGACTAGCAC
801 ATTAGTCATG CGTTGCAATA TTTGATCATT GTATTAAGGT ATATTGTACA
851 TTTATATAAT AAAATTATAT TTCAACTCAA AAAAAAAAAA AAA

Figure 31A

1 MKLLALSALC ALAFAAPRDK RLAVSTITVT GGLGLSTGCV VTGNVLYANG
51 FRVREINPSE QQELVKYQND VAEYKTALKQ AIKEREKIR ARLAGKKVKA
101 VESTKEEDLP KPPQKPSFCT PEDTTQFFFE GCMIQNNKIY VGNTFARDLT
151 QSEIGELKEF EKKFKVYQDY VQKQAEQQVN SLFGGSDFFS ALFSGGETKP
201 STTTVAPELP EDAPEQPPTP NFCTRII

Figure 31B

1 GGTAAATTAC CCAAGTTTGA GAATGATTCA ACTGTTGTTG TTAGCGCTAC
51 TCCCTGTTTG CATCTCAGTG AGGGAACAGT CGATAGCAGT TAAAGGACGC
101 CTTCTGTGCG GTGATCAACC AGCAGCGAAC GTCAGAGTGA AGTTGTGGGA
151 AGAAGACACA GGACCAGATC CAGATGACCT ACTGGATGCA GGATACACGA
201 ACTCTAATGG TGAATTCCAA CTCCAAGGCG GAACAATAGA GACGACTCCC
251 ATTGATCCCG TCTTGAAAAT TTACCATGAT TGCAATGACG TGA CTGGTTT
301 TCTGAGCGTA CCTAACCTG GCAGCAGAAA AGTGAGGTTC TCCTTACCGG
351 ACAAATACAT CAGCGATGGA ATGGTTCCTA AGAAAGTCAT GGACATCGGT
401 GTTATCA

Figure 32A

1 MIQLLLLALL PVCISVREQS IAVKGRLLCG DQPAANVRVK LWEEDTGPDP
51 DDL LDAGYTN SNGEFQLQGG TIETTPIDPV LKIYHDCNDV TGFLSVKPG
101 SRKVRFSLPD KYISDGMVPK KVMDIGVI

Figure 32B

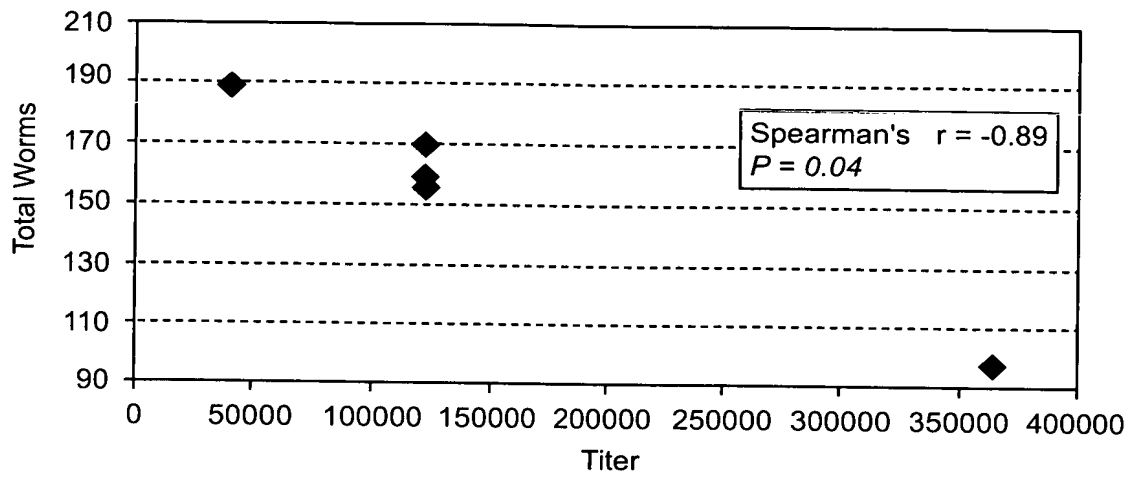


Figure 33A

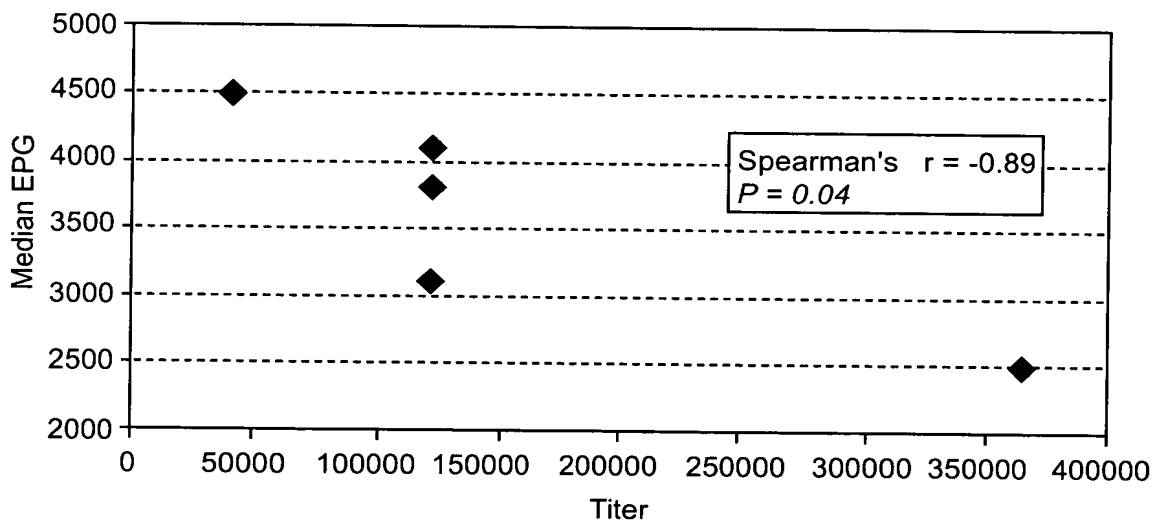


Figure 33B

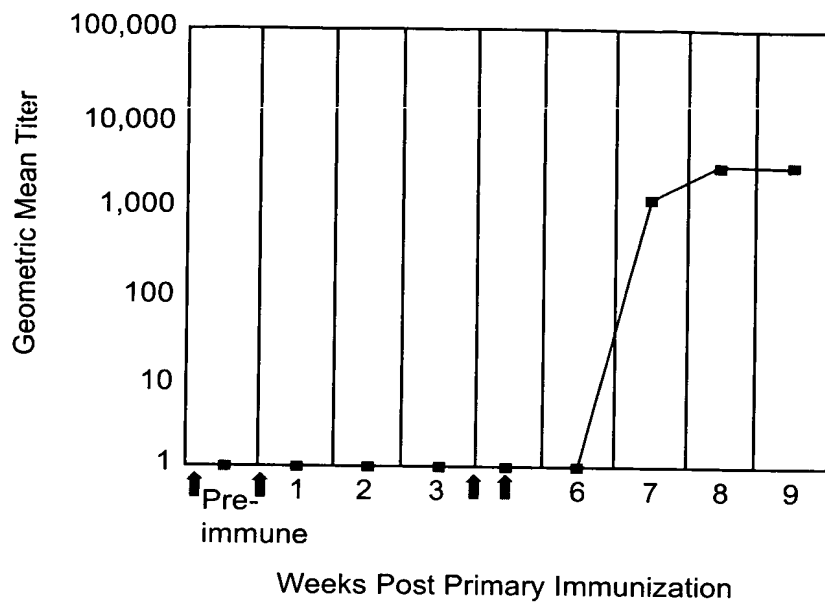


Figure 34A

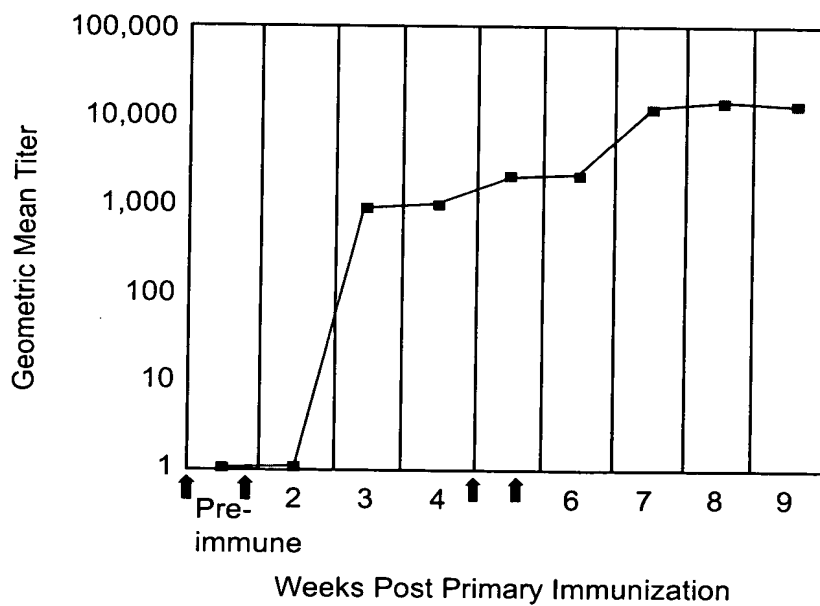


Figure 34B

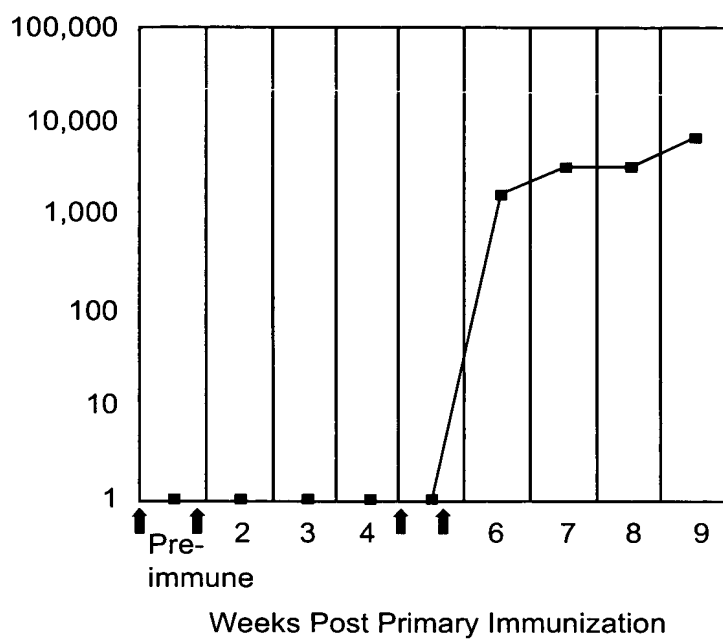


Figure 34C

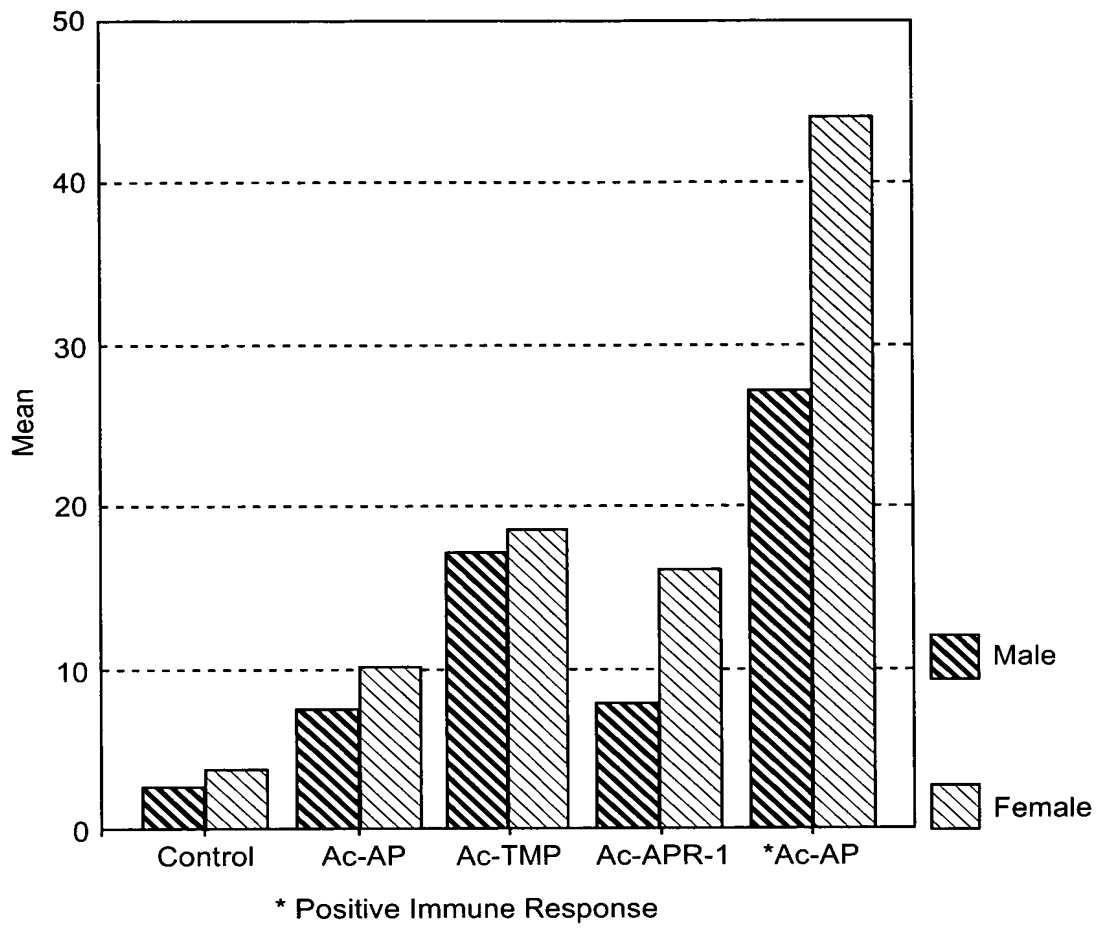


Figure 35

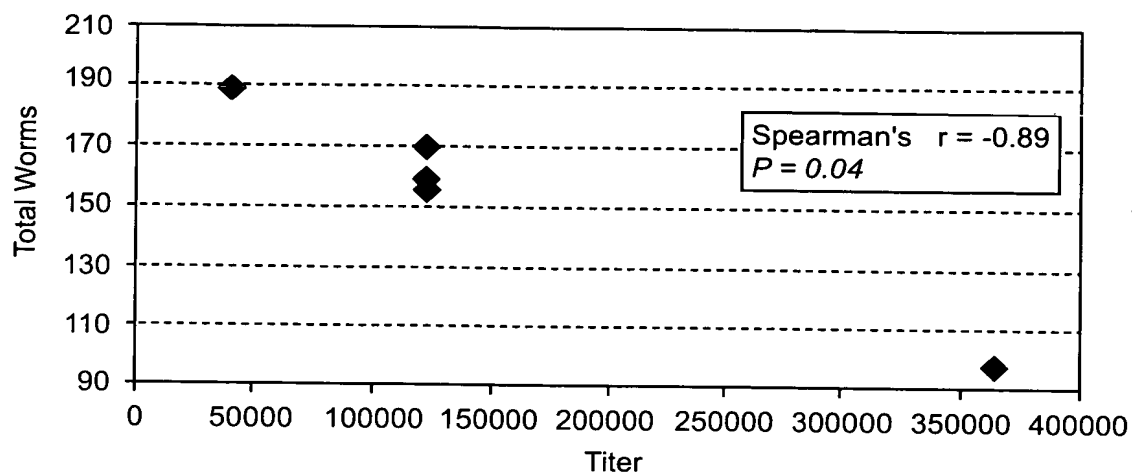


Figure 36A

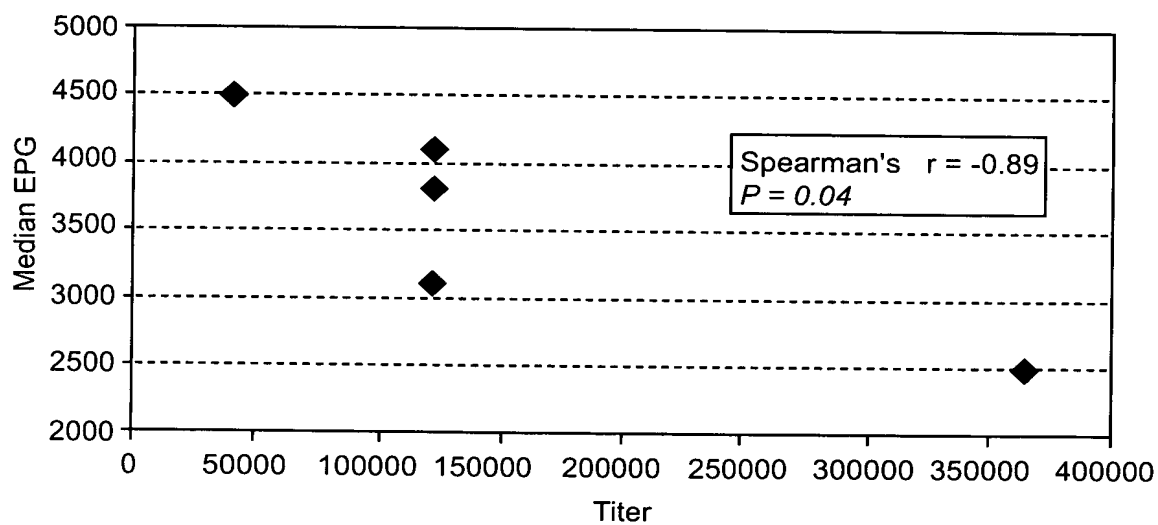


Figure 36B

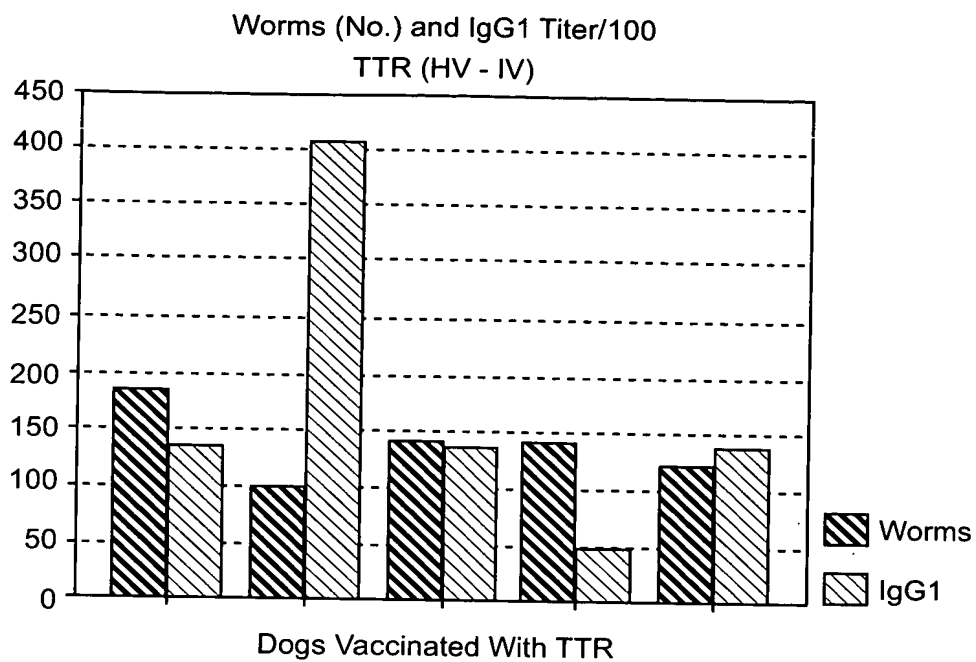


Figure 37A

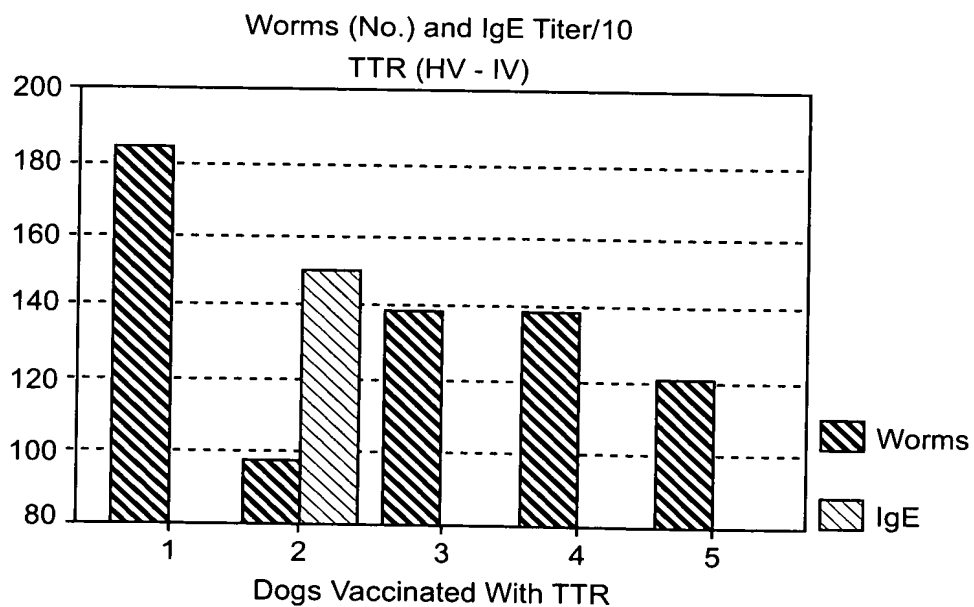


Figure 37B

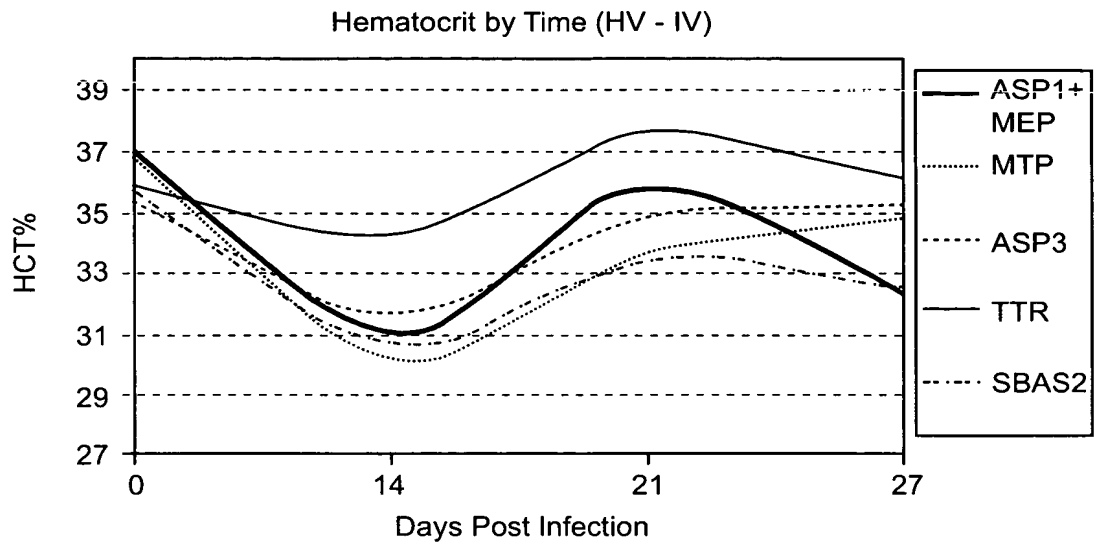


Figure 38A

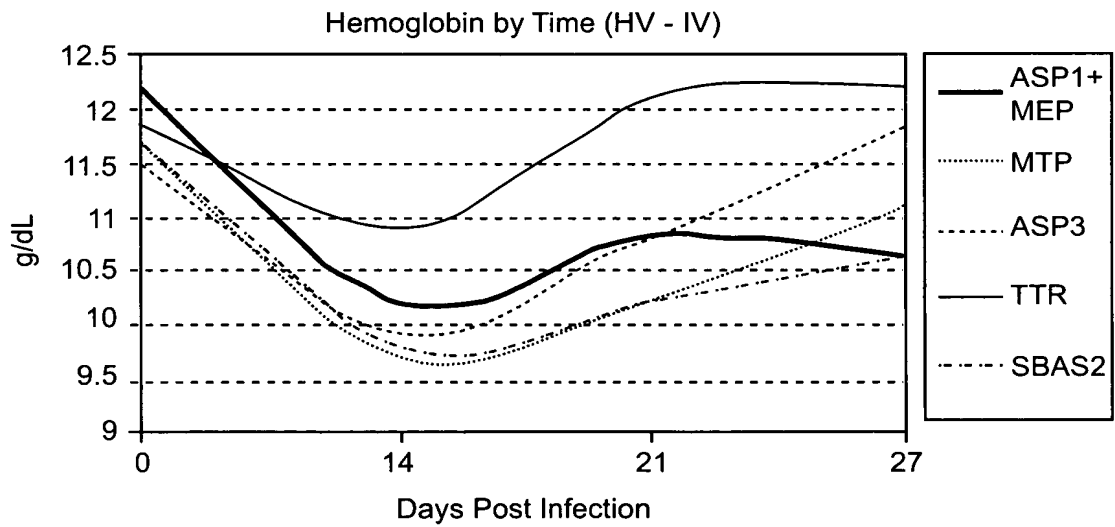


Figure 38B

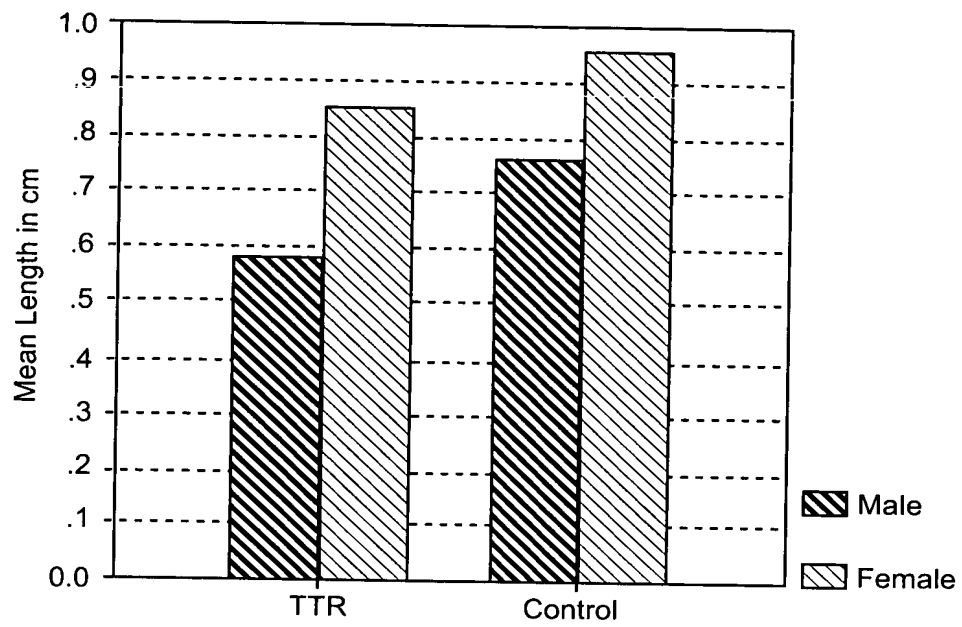


Figure 39

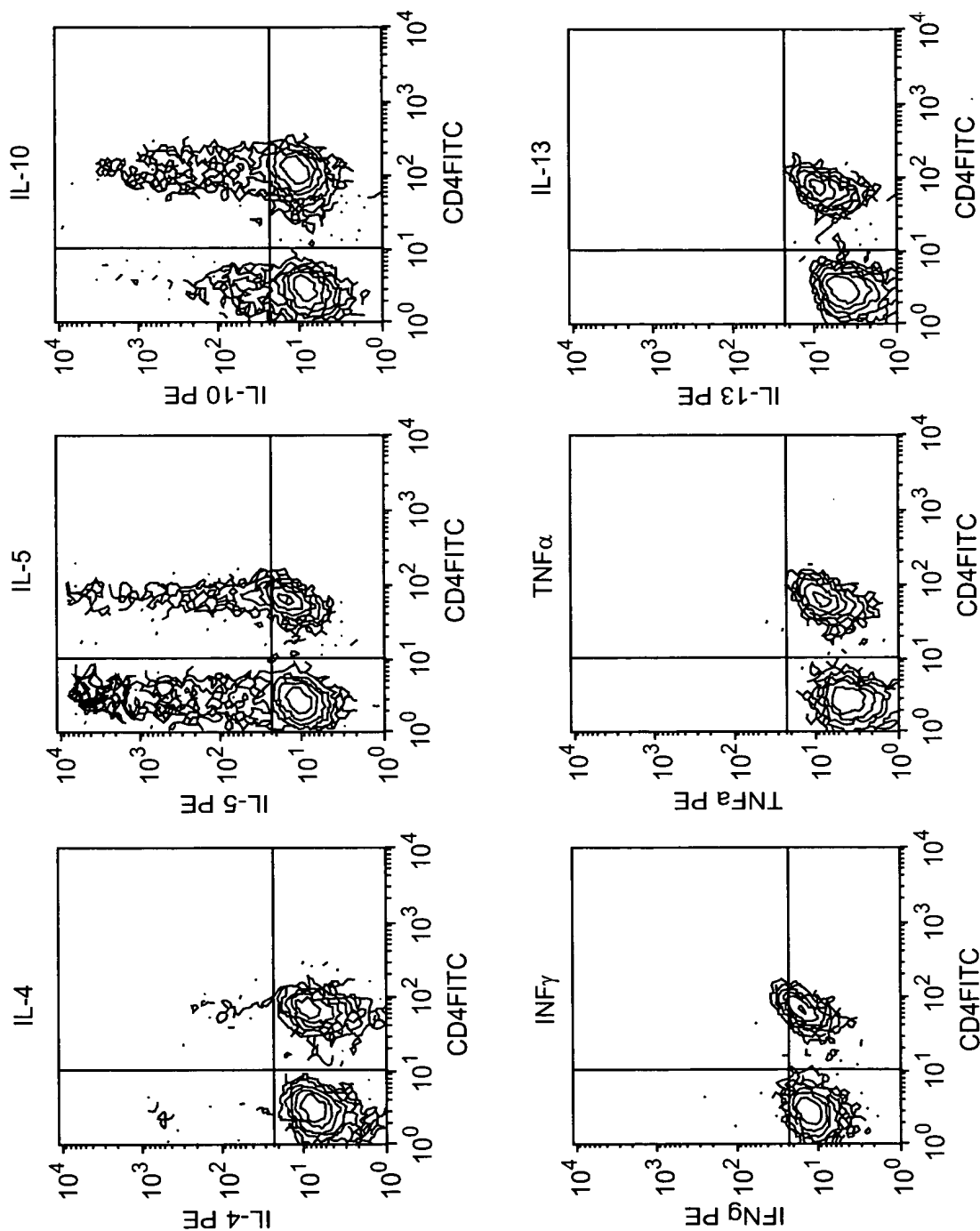


Figure 40

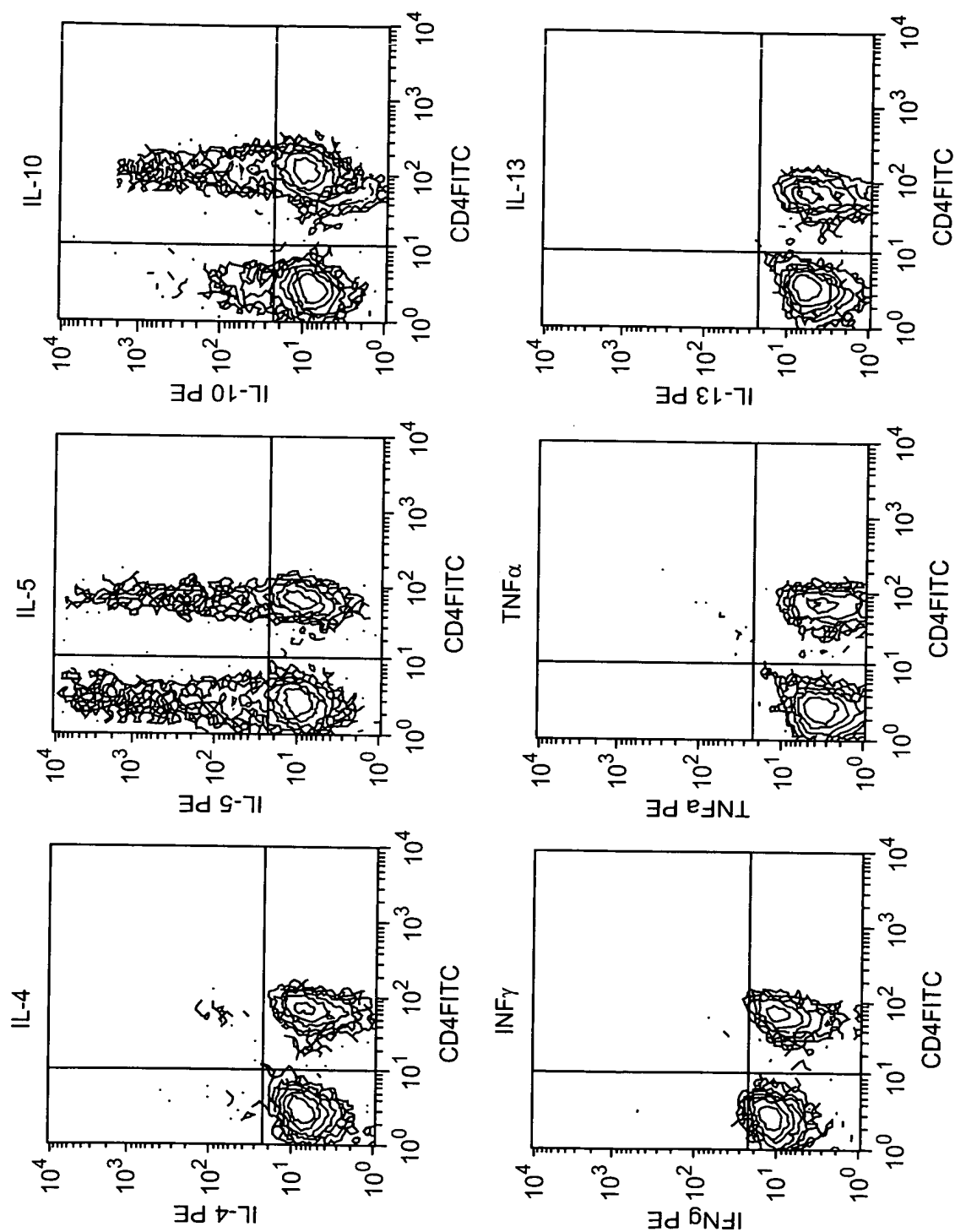


Figure 41

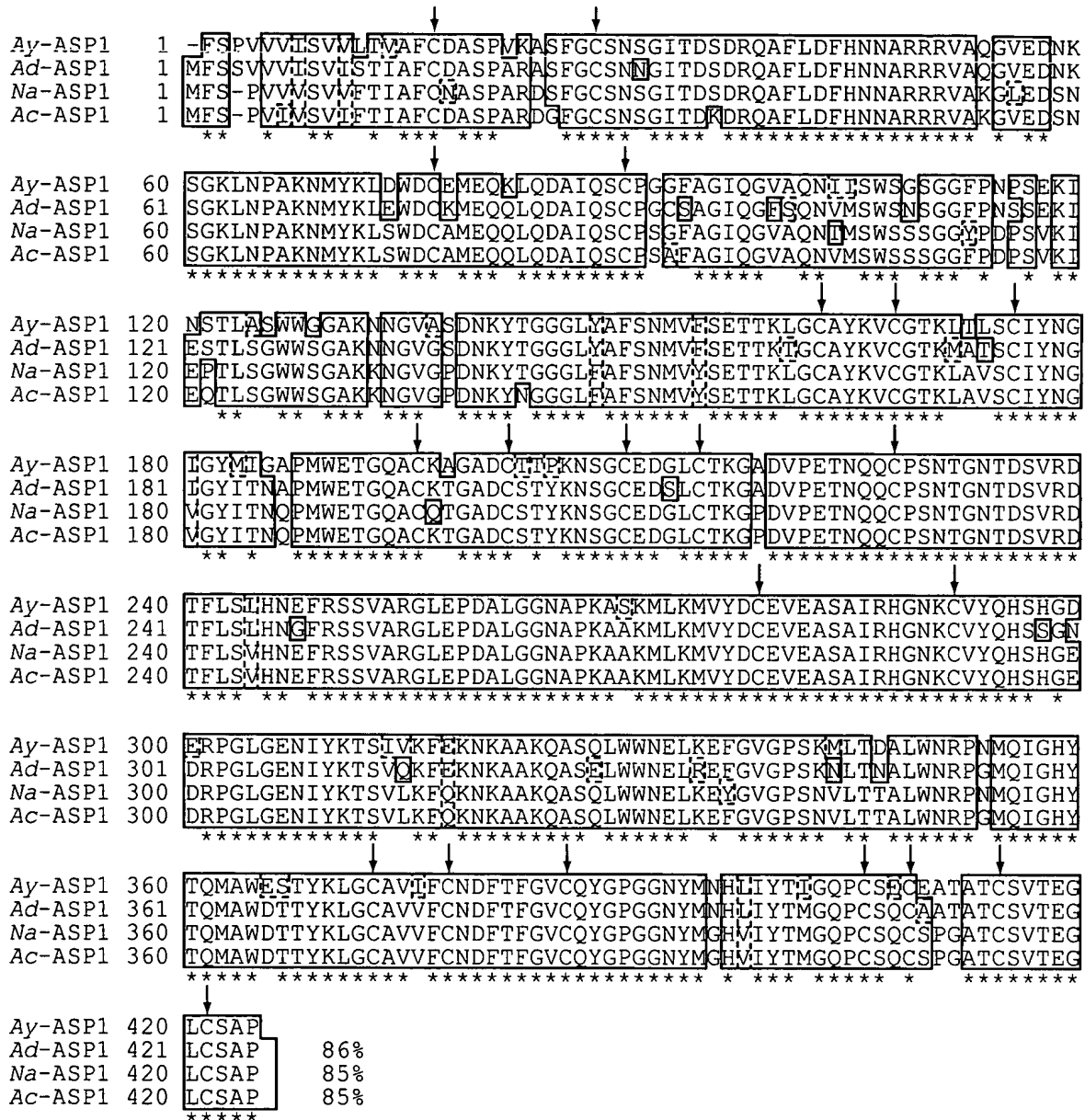


Figure 42

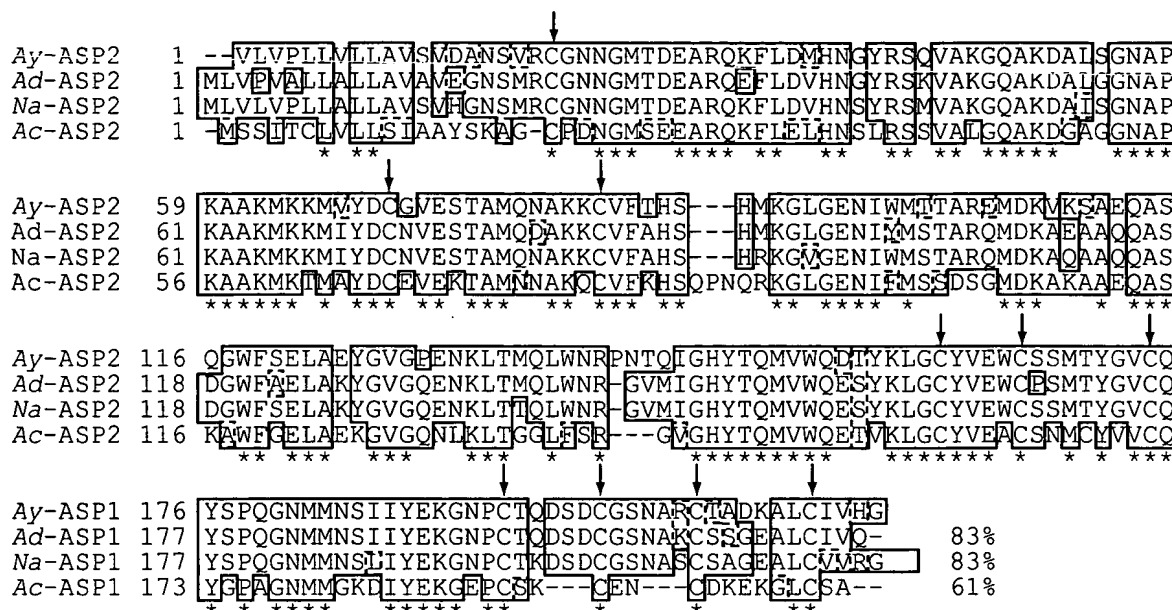


Figure 43A

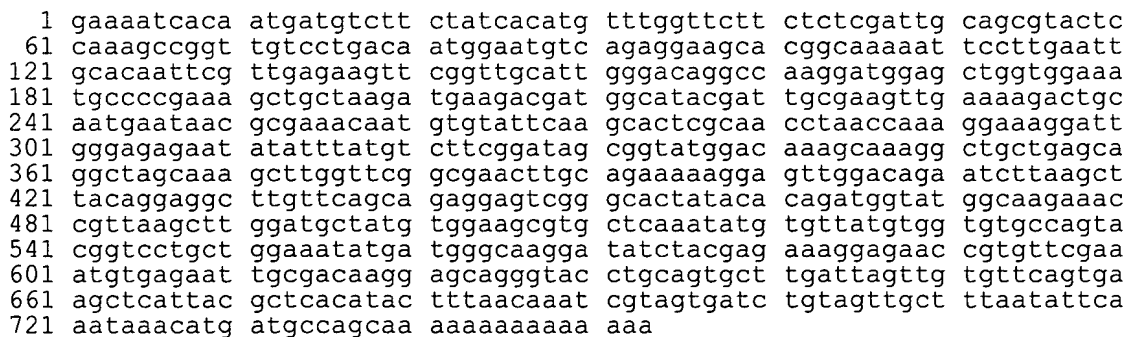


Figure 43B

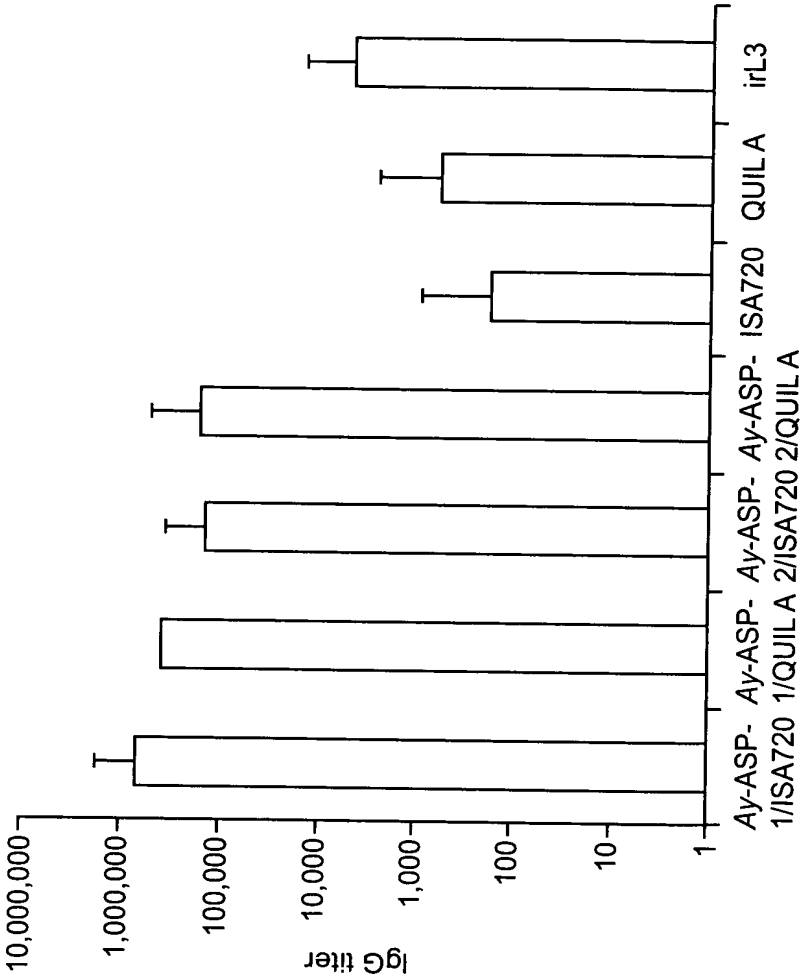


Figure 44

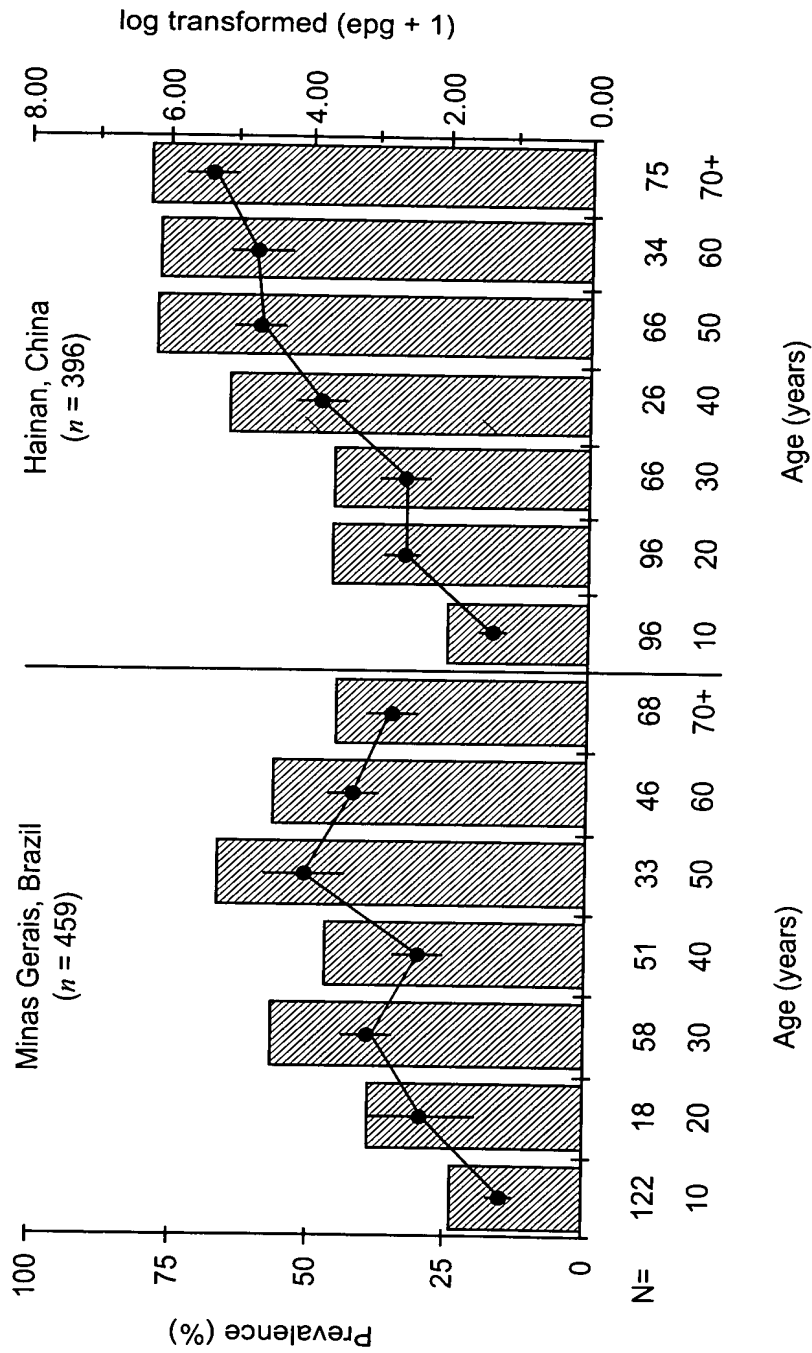


Figure 45

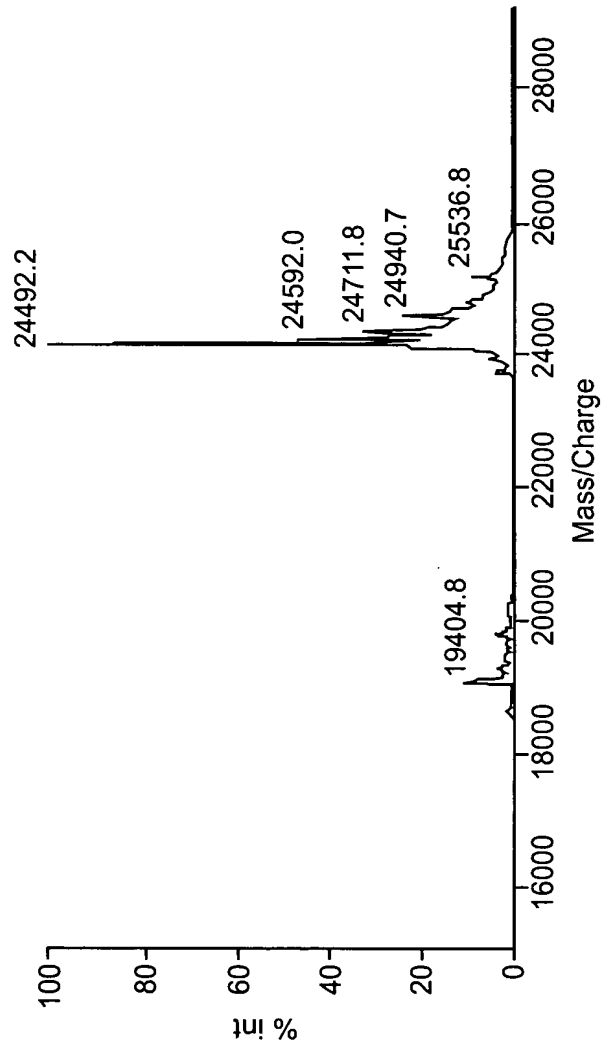
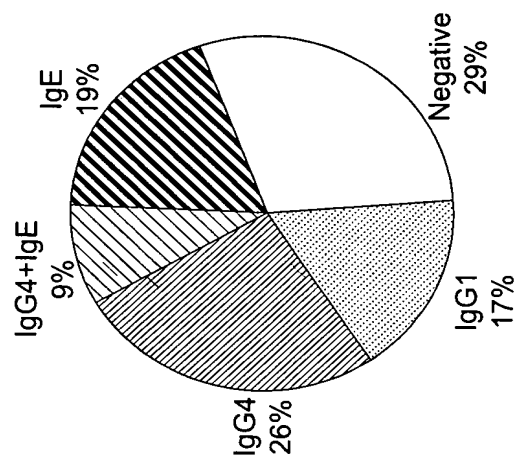
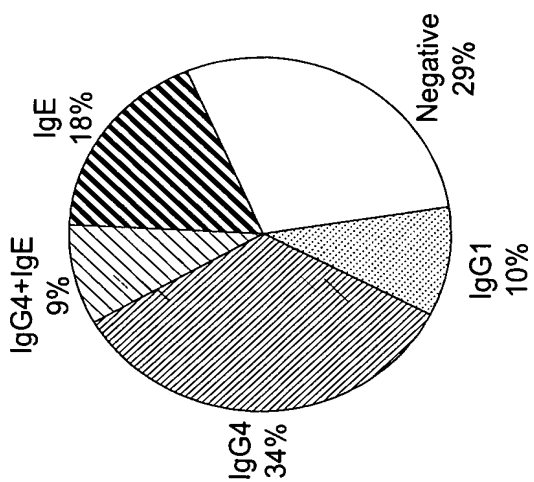


Figure 46



Brazil
(n = 257)

Figure 47B



China
(n = 245)

Figure 47A

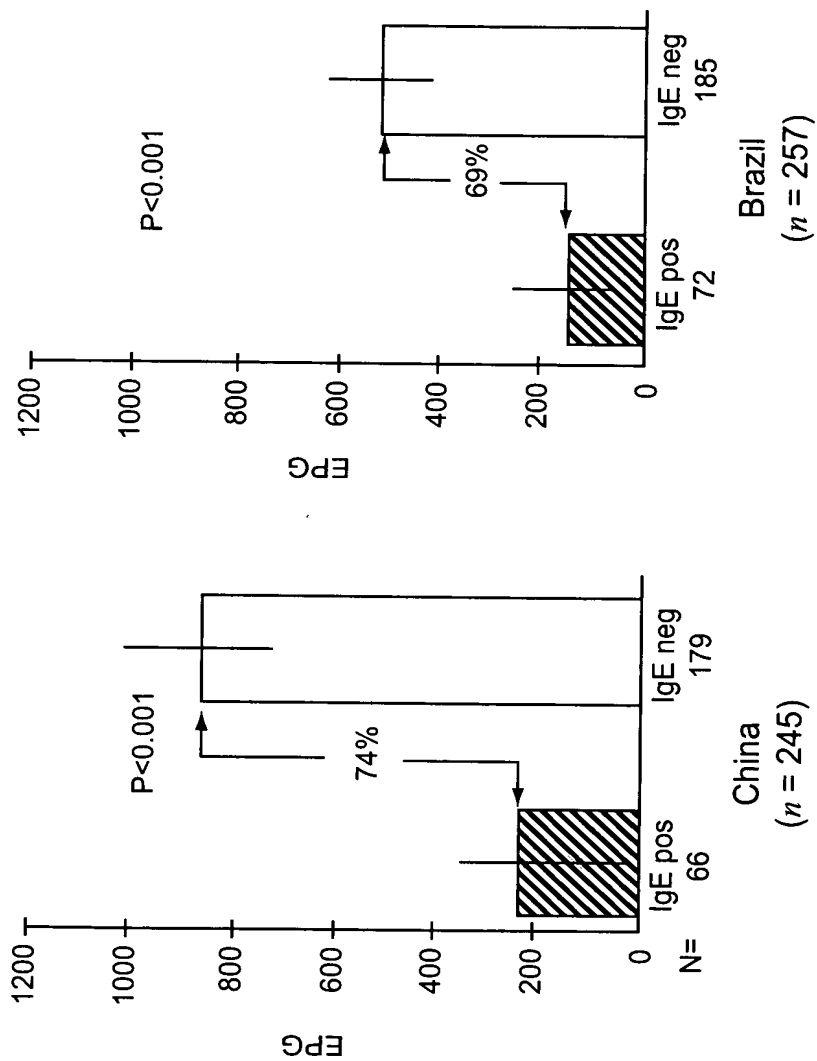


Figure 48A

Figure 48B

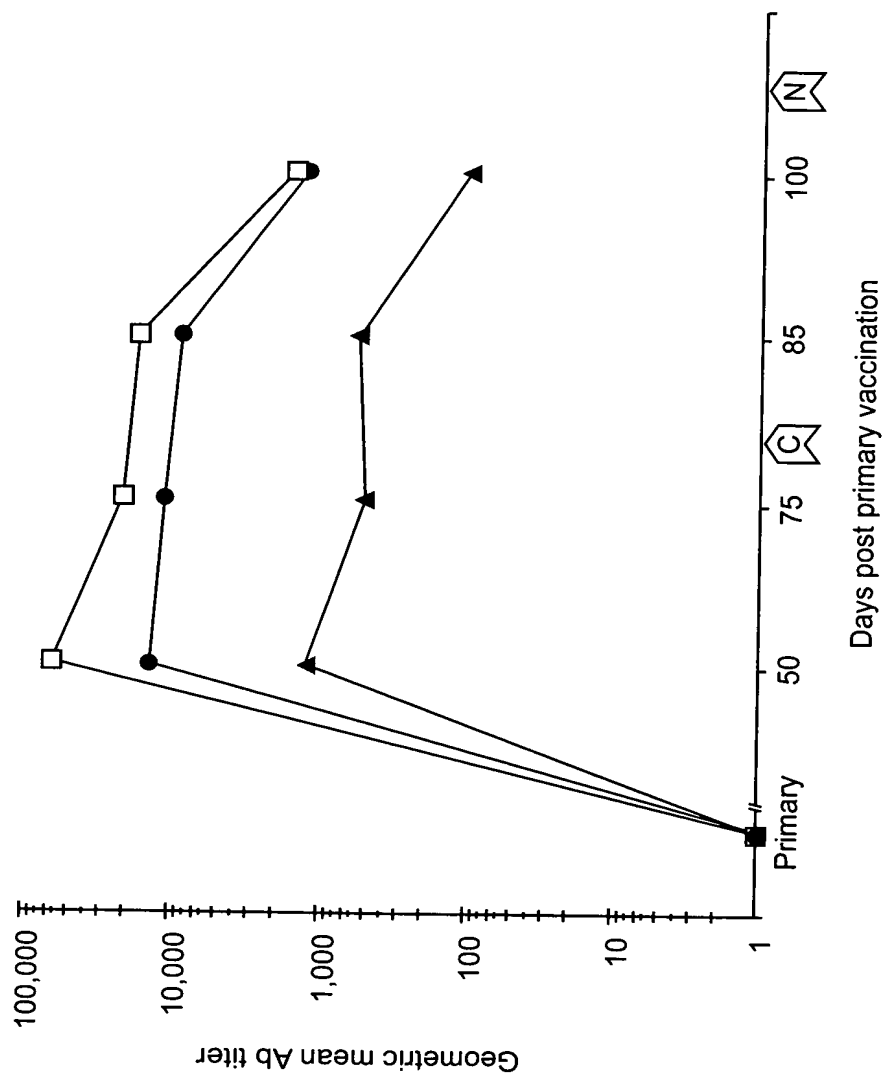


Figure 49

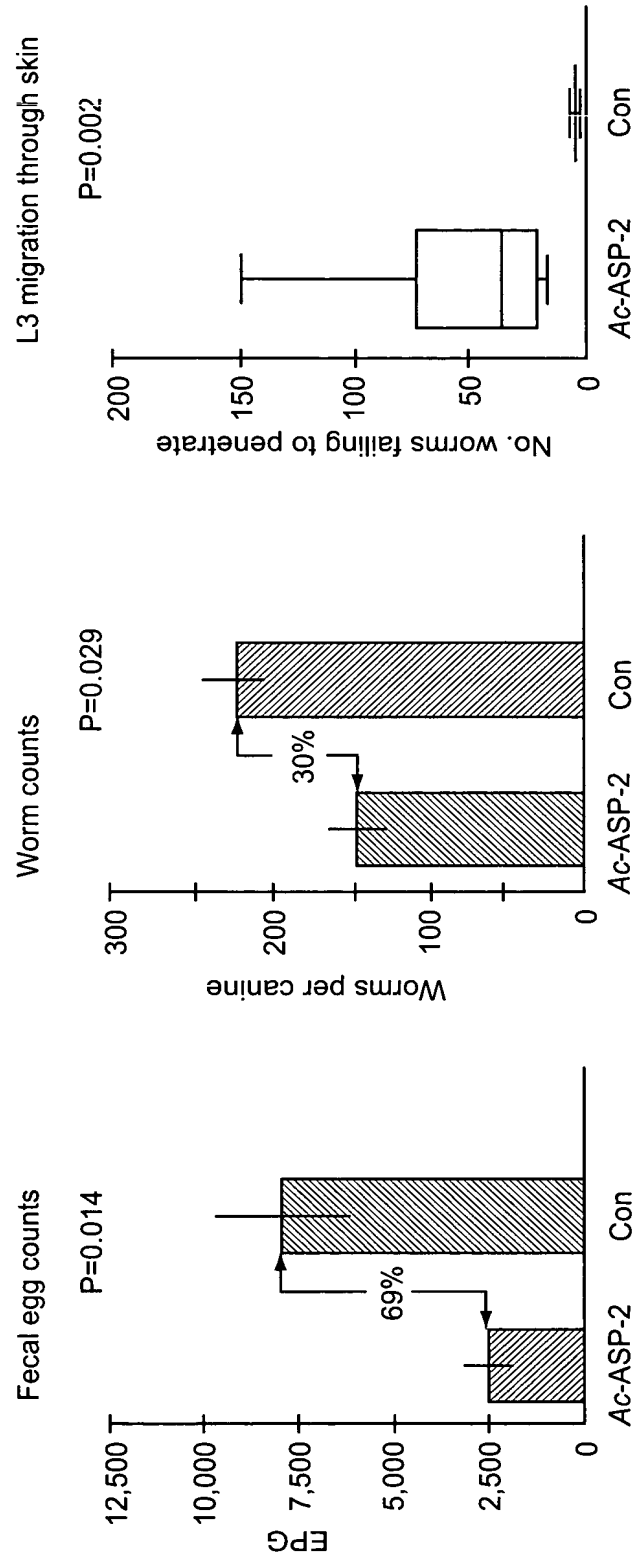


Figure 50A

Figure 50B

Figure 50C

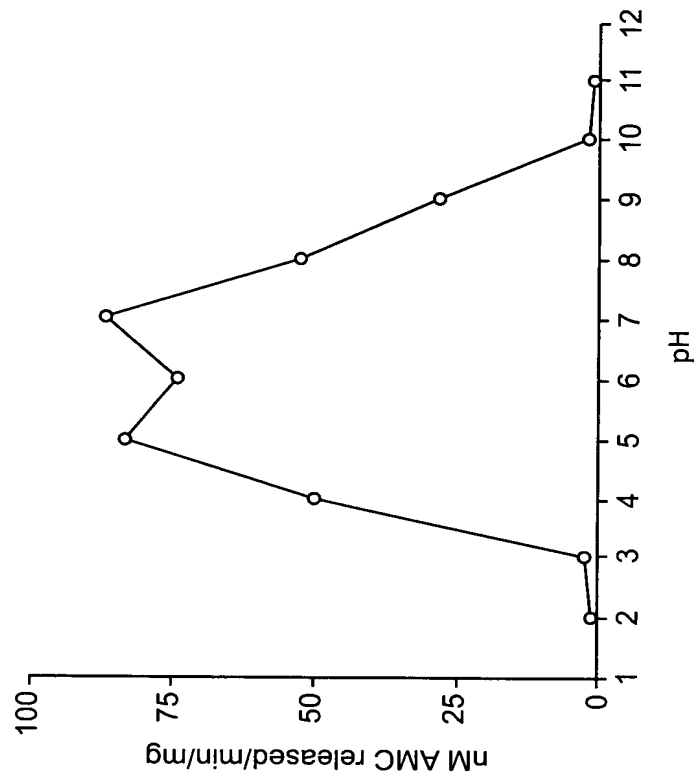


Figure 51

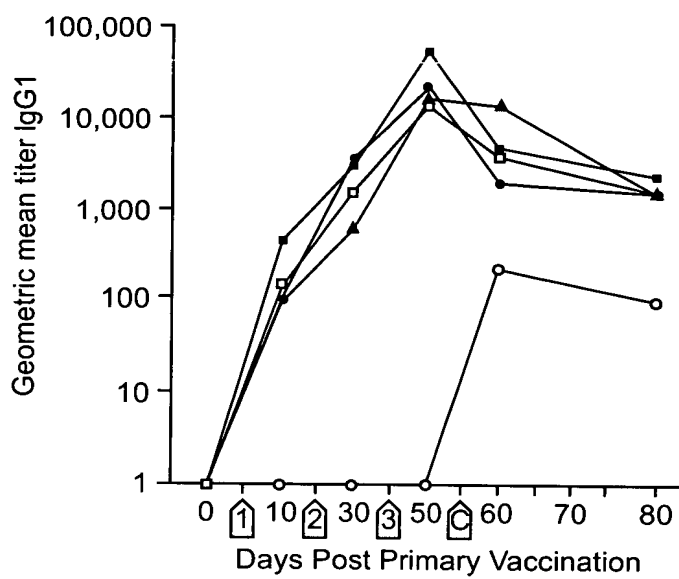


Figure 52A

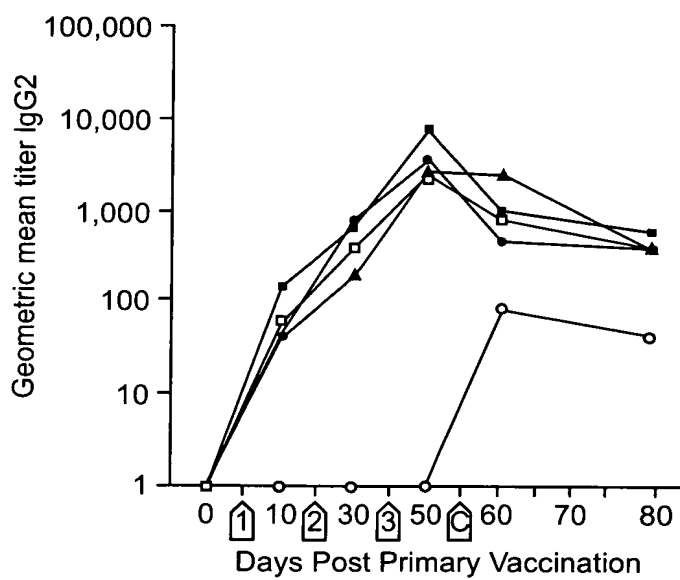


Figure 52B

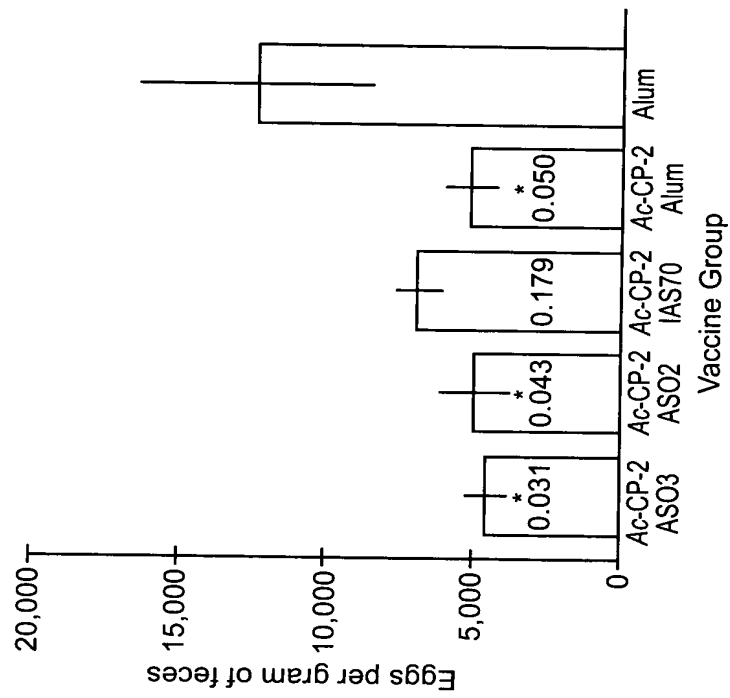


Figure 53

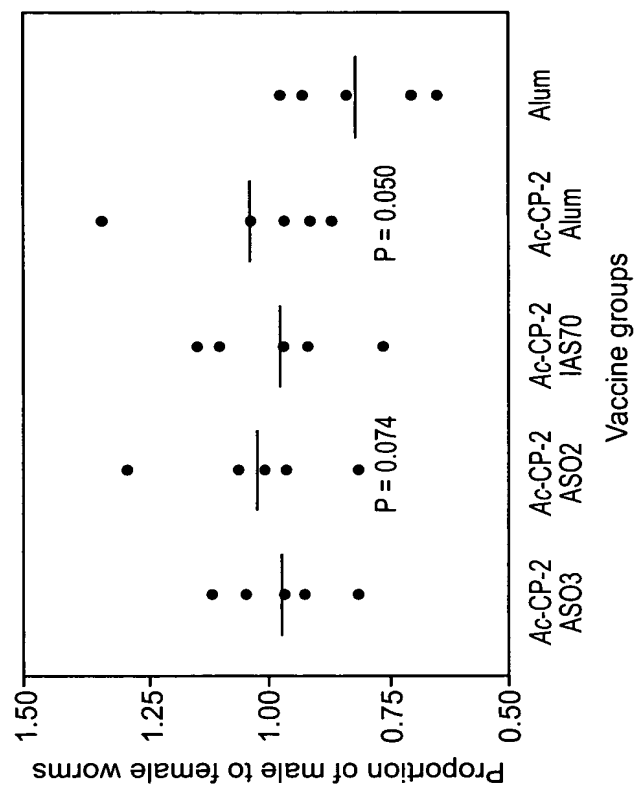


Figure 54

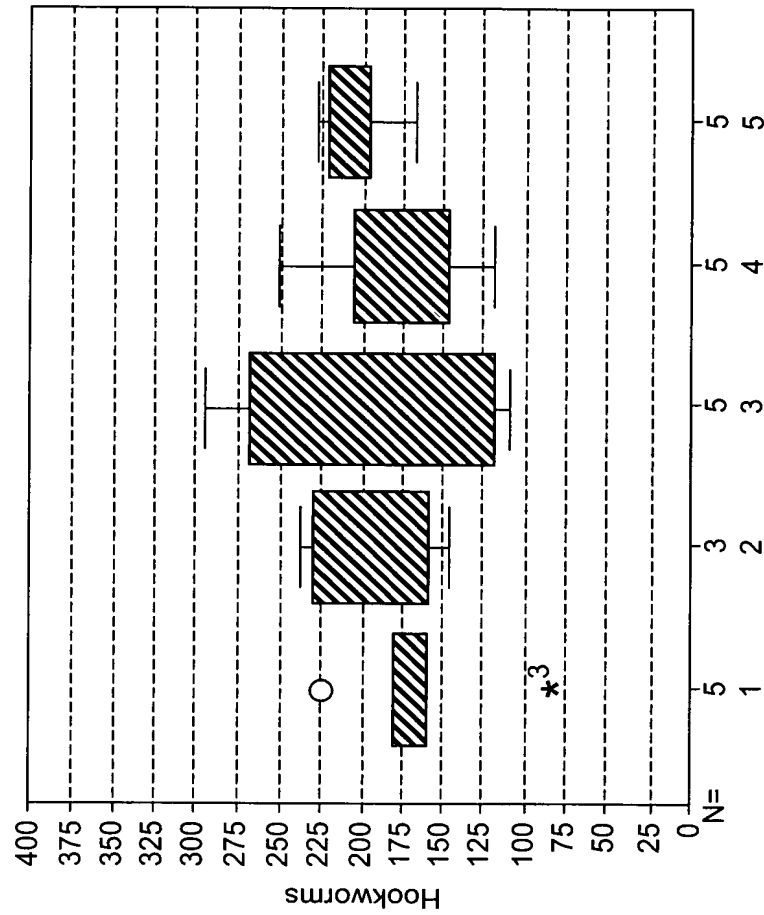


Figure 55

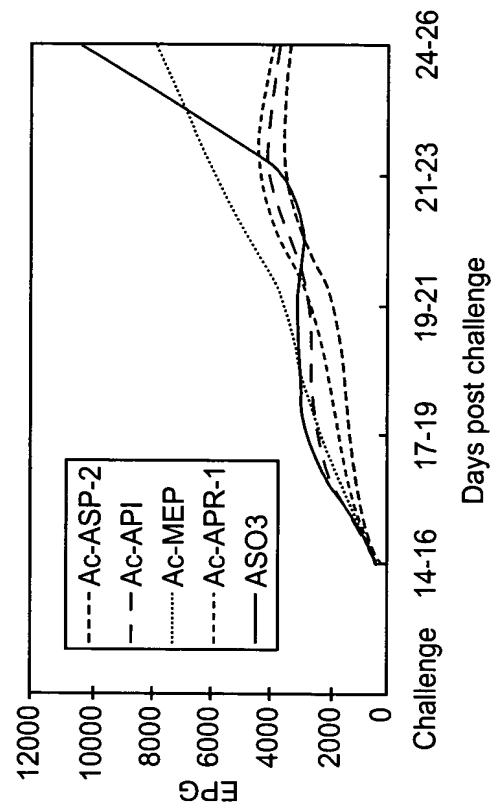


Figure 56

GAAAGGTTTAATTACCCAAGTTTGAGGTGTAAAAATGGTCCACTACAAGCTGACCTACTT
CAACGGACGTGGCCTCGGCGAATGCGCGCGTCAGTTGTTTCGCTCTTGCTGACCAACAATA
TGAGGATATTCGTGTTACACATGAGGATTTCCCCGAGATAAAACCAAATTTGCCATTTGG
ACAACTGCCGCTGCTTAACGAGGATGGTAAAGAACTCGCTCAGTCAAACGCCATCAATCG
TTACCTGGCTAGGAAATTTCGGATTCGCTGGCAAACGCCATTTGAGGAGGCTCTAGTGGA
CTCGCTGGCAGATCAGATGACGGACTACCGTGTAGAAATAAAACCATTCGTCTACACAGC
GTATGGACATCAGAAATTCGGTGACCTGGAGACGCTAAAAAAGGATGTGATGCTTCCTGC
ACGAGACAAGTTCCTCGGTTTCATCACCAAATTCCTTAAAGAACAACCCATCAGGATTCTT
GGTTGGTGACTCGGTGACTTGGATAGATCTATTGCTCGCTGAACATGCTTCCGACATACA
GTCAAAGGTCCCCGAATACCTCGAAGGGTTTCCTGAGGTGAAGGCTCATATGGAAAAGGT
GCGATCTATTCCGAAACTGAAAAAATGGATCGAGACCAGACCGGAGACTCACTTCTGATC
GATACGCGGGATTTTTTC

Figure 57A

MVHYKLTYFNGRGLGECARQLFALADQQYEDIRVTHEDFPEIKPNLPFGQLPLLINEDGKE
LAQSNAINRYLARKFGFAGKTPFEEALVDSLADQMTDYRVEIKPFVYTAYGHQKFGDLET
LKKDVMLPARDKFLGFITKFLKNNPSGFLVGDSVTWIDLLEHASDIQSKVPEYLEGFP
EVKAHMEKVR SIPKLKKWIETRPETHF*

Figure 57B

GAAAGGTTTAATTACCCAAGTTTGAGGTGTAAAAATGGTCCACTACAAGCTGACCTACTT	60
	M V H Y K L T Y F 9
CAACGGACGTGGCCTCGGCGAATGCGCGCGTCAGTTGTTTCGCTCTTGCTGACCAACAATA	120
N G R G L G E C A R Q L F A L A D Q Q Y	29
TGAGGATATTCGTGTTACACATGAGGATTTCCCCGAGATAAAACCAAATTTGCCATTTGG	180
E D I R V T H E D F P E I K P N L P F G	49
ACAACTGCCGCTGCTTAACGAGGATGGTAAAGAACTCGCTCAGTCAAACGCCATCAATCG	240
Q L P L L N E D G K E L A Q S N A I N R	69
TTACCTGGCTAGGAAATTTCGGATTCGCTGGCAAACGCCATTTGAGGAGGCTCTAGTGGA	300
Y L A R K F G F A G K T P F E E A L V D	89
CTCGCTGGCAGATCAGATGACGGACTACCGTGTAGAAATAAAACCATTCGTCTACACAGC	360
S L A D Q M T D Y R V E I K P F V Y T A	109
GTATGGACATCAGAAATTCGGTGACCTGGAGACGCTAAAAAAGGATGTGATGCTTCCTGC	420
Y G H Q K F G D L E T L K K D V M L P A	129
ACGAGACAAGTTCCTCGGTTTCATCACCAAATTCCTTAAAGAACAACCCATCAGGATTCTT	480
R D K F L G F I T K F L K N N P S G F L	149
GGTTGGTGACTCGGTGACTTGGATAGATCTATTGCTCGCTGAACATGCTTCCGACATACA	540
V G D S V T W I D L L L A E H A S D I Q	169
GTCAAAGGTCCCCGAATACCTCGAAGGGTTTCCTGAGGTGAAGGCTCATATGGAAAAGGT	600
S K V P E Y L E G F P E V K A H M E K V	189
GCGATCTATTCCGAAACTGAAAAAATGGATCGAGACCAGACCGGAGACTCACTTCTGATC	660
R S I P K L K K W I E T R P E T H F *	207
GATACGCGGGATTTTTTC	678

Figure 57C

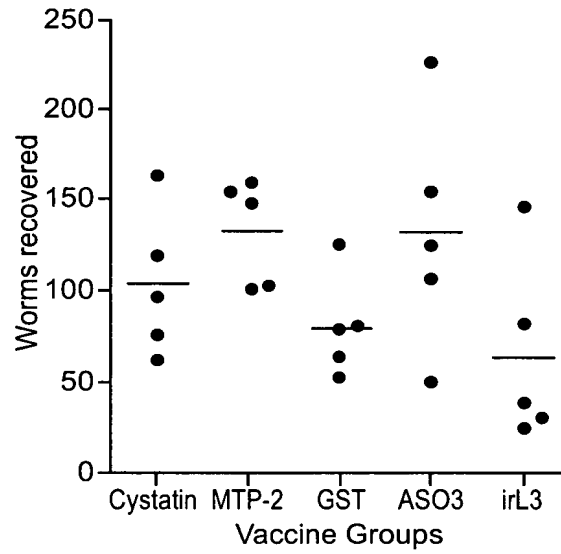


Figure 58A

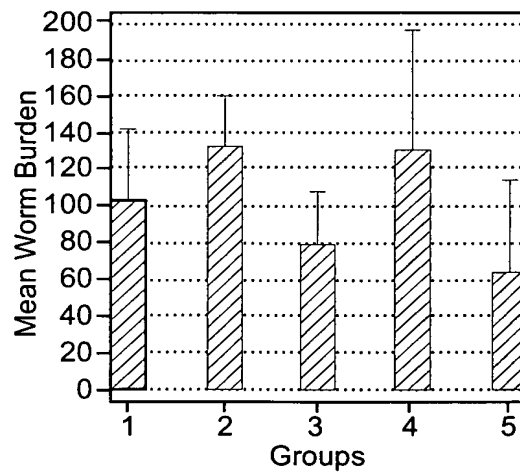


Figure 58B

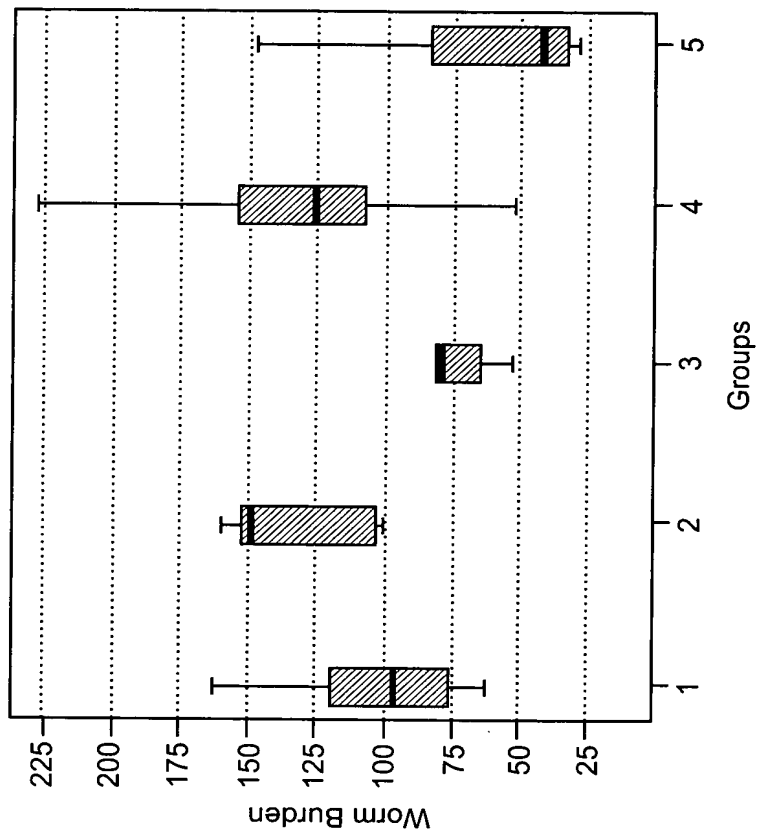


Figure 59

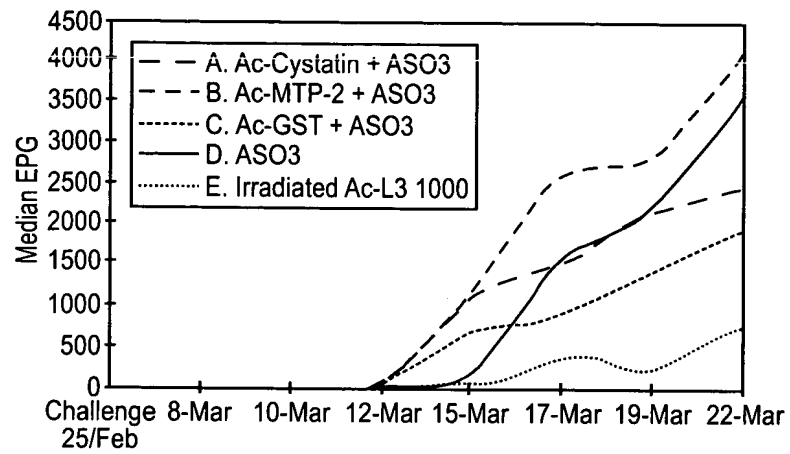


Figure 60A

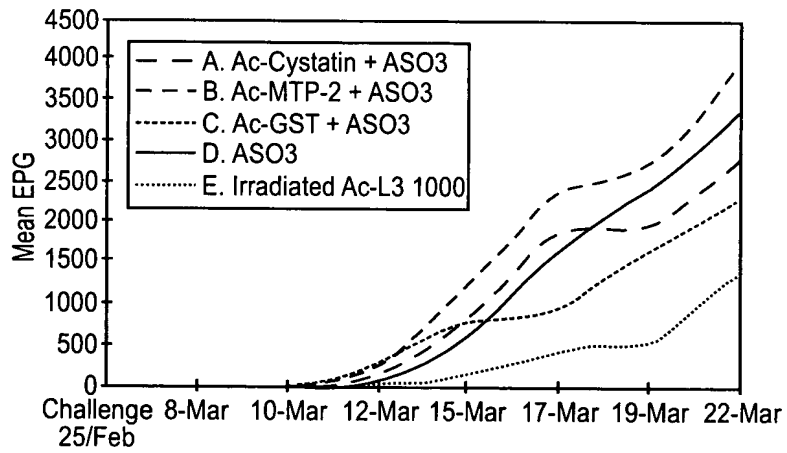


Figure 60B

GTAAAGCCGTGTAAGCAACAGGGTTCTTTGTGATGTTAACTCTCGCTGCACTTCTGAT
TTCTGTTTCGCTGGTTGAGCCGACAGGCATAGGTGAGTTTCTTGCTCAACCAGCACCTG
CATATGCTAGAAGACTCACAGGGCAGGCCCTTGTTGACTACGTCAATTCGCACCACTCA
TTGTACAAGGCCAAATATTCACCAGATGCTCAAGAACGCATGAAATCTAGAATTATGGA
TTTGAGTTTCATGGTTGATGCGGAAGTCATGATGGAAGAAATGGACCAGCAGGAGGATA
TAGATCTCGCTGTTTCTTTACCTGAAAGTTTTCGACGCTCGTGAAAAATGGCCAGAATGT
CCTTCAATAGGATTAATCCGTGATCAGTCCGCCGGTGGAGGATGTTGGGCAGTATCCTC
AGCAGAGGTGATGACCGACAGGATCTGTATACAATCAAATGGAACAAAGCAGGTGTATG
TTTCCGAAACGGATATCTTATCATGCTGTGGACAACGTTGCGGTAGCGGGTGACCTCA
GGTGTGCCACGTCAAGCTTTCAACTATGCAATTCGTAAAGGTGTTTGCAGTGGAGGACC
ATATGGAACGAAGGGTGTGTTGCAAACCCTATCCTTTCTATCCATGCGGCTATCATGCTC
ATCTGCCATATTATGGACCATGTCCAGATGGTATGTGGCCTACGCCAACATGCGAAAAG
GCATGTCAATCCGACTATACTGTTCCGTACAACGATGACAGGATCTTCGGCAGCAAAAC
TATTGTCTTGACGGGAGAGGAAAAAATTAAGCGAGAGATTTTCAATAACGGACCATTGG
TAGCCACGTATACAGTTTACGAAGATTTTCGCTTATTACAAGAATGGAATTTACATGACT
GGTCTCGGTAGAGCGACAGGCGCACATGCAGTCAAAATTATTGGCTGGGGTGAAGAAAA
TGGAGTCAAGTATTGGTTGATTGCAAACCTCGTGGAACACTGATTGGGGAGAGAATGGCT
TCTTCCGCATGCTTCGTGGAACAAACCTTTGCGATATTGAACTAAGCGCGACTGGAGGA
ACGTTCAAGGTGTGAACGTGATCGAAAAGAACGATTTTGAACAAAAATCTTCCCGTATT
GTCATCAAAAAAA

Figure 61A

MLTLAALLISVSLVEPTGIGEFQAQPAPAYARRLTGQALVDYVNSHHSLYKAKYSPDAQ
ERMKSRIMDLSEFMVDAEVMMEEMDQQEDIDLAVSLPESFDAREKWPECPSIGLIRDQSA
GGGCWAVSSAEVMTDRICIQSNQTKQVYVSETDILSCCGQRCGSGCTSGVPRQAFNYAI
RKGVCSSGPGYTKGVCKPYPFYPCGYHAHLPPYGPCPDGMWPTPTCEKACQSDYTVPIN
DDRIFGSKTIVLTGEEKIKREIFNNGPLVATYTVYEDFAYYKNGIYMTGLGRATGAHAV
KIIGWGEENGVKYWLANSWNTDWGENGFFRMLRGTNLCDIELSATGGTFKV*

Figure 61B

TTAATTCTTATTGCTCTGGTGGTGACGGCGTTGGCTCAACAGCCGCTTTCACTAAAGGA
GTATCTGGAACAGCCGATACCAGAGGAGGCAGAGAATCTTTCCGGAGAAGCGTTTGCGG
AGTTTCTGAACAAACGACAATCGTTTTTTCACGGCTAAGTACACGCCAAATGCTTTAAAC
ATTCTTAAAATGCGTGTGATGGAATCGAGATTCCTGGACAATGAAGAAGGTGAAATGCT
AAAAGAGGAGGACATGGATTTTCAGTGAAGAAATTCCTGTTAGTTTTGATGCTCGAGACA
AATGGCCCCAAATGCACCTCCATAGGATTTATCCGTGATCAATCACACTGTGGTTCATGC
TGGGCAGTATCGTCAGCAGAAACGATGTCAGATCGACTCTGCGTGCAATCAAACGGTAC
AATTAAGGTACTTCTATCCGATACGGACATCCTTGCCGTGTTGCCCCGAATTGTGGTGCTG
GATGTGGAGGAGGCCACACAATTCGAGCGTGGGAATATTTTAAGAACACAGGCGTTTGC
ACTGGCGGACTATATGGAACAAAGGATTCCTGCAAACCATACGCTTCTATCCATGTAA
AGACGAAAGTTACGGAAAGTGCCCCAAGGATTCCTTTCCAACACCAAATGTCGAAAAA
TTTGTGAGTATAAATACAGTAAGAAGTACGCCGACGACAAATACTACGCGAATTCCGCA
TATCGAATTCACAGAATGAGACGTGGATCAAATTGGAGATCATGAGAAACGGGCCTGT
GACAGCATCATTTCAGGATTTATCCGGATTTTGGGTTTTACGAAAAAGGAGTTTATGTGA
CTTCAGGCGGAAGGGAAGTGGTGGGCACGCGATTAAAAATCATTGGATGGGGAACGGA
AAAAGTAAACGGAAGTACCTACCTTACTGGTTGATTGCTAACTCTTGGGGTACTGACT
GGGGAGAGAATAACGGCTATTTCCGCATACTTCGCGGACAAAATCACTGCCAAATAGAA
CAGAAAGTTATCGCCGGTATGATAAAAGTACCACAACCGAAATCCGCCGGTCCACCACT
TCAACCCAATCCTTCAAGCTGAACCAAGTTGTAGTATTGTCCCCATCAATCCAAGCATT
TCTTGGGGTGATACTTTTACGAATAAAACTACATTATAAAAAAAAAAAAAAAAAAAAAA

Figure 62A

LILIALVVOTALAQQPLSLKEYLEQPIPEEAENLSGEAFAEFLNKRQSFFTAKYTPNALN
ILKMRVMESRFLDNEEGEMLKEEDMDFSEEIPVSFDARDKWPKCTSIGFIRDQSHCGSC
WAVSSAETMSDRLCVQSNGTIKVLLSDTDILACCPNCGAGCGGGHT1RAWEIFKNTGVC
TGGLYGTKDSCKPYAFYPCKDESYGKCPKDSFPTPKCRKICQYKYSKKYADDKYYANSA
YRIPQNETWIKLEIMRNGPVTASFRIYPDFGFYEKGVYVTSGGRELGGHAIKIIIGWGE
KVNGTDLPYWLANSWGTDWGENNGYFRILRGQNHQCIEQKVIAGMIKVPQPKSAGPPL
QPNPSS*

Figure 62B

TCGTTGAGGCGTTATTTCAAGCTTCTCTCGCCTCGATTTCAGATTCTCCAATTGTTTCA
GTGAATCGTGGAACAGTCAATCTCACTTTTGTGAGATCCAATGAAAGCTAATTTTGCGT
TGGTCGTCGTCCTTCTGGCAATAAACAGTTATATGCAGATGAGCTGCTTCACAAACAA
GAGTCCGAACACGGACTTAGTGGCCAAGCGCTCGTTGACTACGTTAATTCGCACCAATC
ACTTTTCAAAACAGAATATTCGCCAACCAATGAACAATTCGTTAAAGCCCGTATAATGG
ACATAAAGTATATGACTGAGGCTAGCCACAAATATCCAAGAAAGGGCATTAAATCTGAAC
GTTGAACTCCCTGAAAGGTTTGACGCACGTGAAAAATGGCCACATTGCGCCTCCATCGG
TCTCATTCGCGATCACTCTGCTTGCGGATCGTGTTGGGCTGTATCGGCAGCGTCGGTTA
TGTCAGATCGACTCTGTATCCAGACGAACGGCACAAACCAGAAGATCCTTTTCGTCGGCG
GACATCCTTGCGTGTTGTGGAGAAGACTGTGGCTCAGGATGCGAAGGCGGTTATCCGAT
TCAGGCGTACTTCTACCTGGAAAATACTGGAGTATGTAGTGGAGGAGAGTATCGAGAAA
AGAATGTATGCAAACCATATCCCTTTTATCCGTGTGACGGAAACTATGGACCATGCCCC
AAGGAGGGTGCGTTCGACACTCCAAAGTGTGCGAAAATATGTCAGTTCCGATATCCTGT
TCCATACGAAGAAGATAAAGTGTTTGGAAAAAATTCACACATCCTTCTGCAAGACAACG
AGGCAAGAATCAGACAGGAAATTTTCATAAACGGACCAGTGGGAGCTAATTTTTTACGTT
TTCGAAGACTTTTATACTACAAGGAAGGGATTTATAAGCAGACATATGGGAAATGGAT
AGGAGTACATGCAATCAAACCTTATTGGTTGGGGCACAGAAAATGGAACAGATTATTGGT
TGGTTGCTAACTCGTACAACACTACGACTGGGGAGAGAATGGCACCTTCCGCATTCTTCGT
GGAATAATCACTGTTTGATAGAATCACAAGTGATCGCAACGGAGATGATTGTATGAAT
GTCTAATGAACGATTGGTCGCATGCCGATCTCTGAAGTAAATGTGTTAATCAAAAAAA
A

Figure 63A

MKANFALVVVLLAINQLYADELLHKQSEHGLSGQALVDYVNSHQSLFKTEYSPTNEQF
VKARIMDIKYMTEASHKYPRKGINLNVELPERFDAREKWPHCASIGLIRDHSACGSCWA
VSAASVMSDRLCIQTNGTNQKILSSADILACCGEDCGSGCEGGYPIQAYFYLENTGVCS
GGEYREKNVCKPYPFYPCDGNYGPCPKEGAFDTPKCRKICQFRYPVPYEEDKVF GKNSH
ILLQDNEARIRQEIFINGPVGANFYVFEDFIHYKEGIYKQTYGKWIGVHAIKLIGWGE
NGTDYWL VANSYNYDWGENGTFRILRGTNHCLIESQVIATEMIV*

Figure 63B

TAGATAATAATCTTTTTGCACGTCAGAGAATTTCTTTGATAAAACCACAATTAAACAAT
CTCAGCGCTGTAAACACGTGCAAACTACTCGTTCATTTCTCTTCACTTTCCCTCCAAA
ACCAAACATTCAAGAGAAGCATGATAACCATCATTACCCTATTGCTTATCGCTTCTACA
GTGAAGTCACTAACAGTGGAGGAGTACTTGGCCCCGACCAGTGCCGGAATATGCCACAAA
ACTGACAGGACAAGCCTACGTTGACTATGTTAATCAGCATCAATCATTCTACAAGGCTG
AATATTCCCCGCTGGTTGAACAGTATGCCAAAGCTGTGATGAGATCTGAGTTTATGACG
AAGCCGAACCAAAATTATGTGGTGAAGGACGTAGATCTAAACATCAATCTTCCAGAAAC
CTTCGACGCAAGGGAAAAATGGCCAACTGCACATCAATAAGGACAATTCGCGATCAGT
CCAATTGTGGATCATGTTGGGCAGTATCAGCGGCGTCGGTAATGTCAGATCGTTTATGC
ATACAGTCGAACGGCACAATACAGTCATGGGCTTCTGATACGGATATTCTATCATGTTG
CTGGAATTGCGGAATGGGATGCGATGGAGGTAGACCGTTTGCGGCGTTCTTTTTTCGCGA
TAGACAATGGTGTATGCACTGGAGGACCTTTCAGAGAGCCAAACGTGTGCAAACCATAC
GCTTTCTATCCATGCGGTGCGCCACCAAAACCAGAAATACTTCGGACCTTGTCCAAAAGA
GCTCTGGCCCCACTCCAAAATGTGCGGAAAATGTGTCAACTAAAATATAATGTGGCCTACA
AAGACGATAAAATTTACGGGAATGATGCATACAGTCTCCCTAACAATGAGACACGAATC
ATGCAAGAAATTTTACAAATGGACCTGTAGTGGGATCATTTCAGCGTGTGTGCTGACTT
TGCAATTTATAAGAAAGGAGTATATGTGAGTAATGGAATTCAGCAGAATGGGGCTCATG
CAGTCAAAATTATTGGTTGGGGTGTGCAGGATGGACTAAAATATTGGTTGATTGCTAAT
TCCTGGAACAATGACTGGGGAGACGAAGGCTATGTCCGGTTCCTTCGTGGAGATAACCA
CTGTGGAATTGAATCAAGGGTGGTGACAGGAACATGAAAGTGTAACAATAATTAGT
CTTTTCCTGACGATTTCAAATAAAATCTTTGCCACTAAAAAAAAAAAAAAAAAAAAA

Figure 64A

MITIITLLLIAS TVKSLTVEEYLARPVPEYATKLTGQAYVDYVNQHQS FYKAEYSPLVE
QYAKAVMRSEFMTKPNQNYVVKDVLNINLPETFDAREKWPNCTSIRTIRDQSNCGSCW
AVSAASVMSDRLCIQSNGTIQSWASD TDILSCWNCGMGCDGGRPF AAF FFAIDNGVCT
GGPFREPNVCKPYAFYPCGRHQNKYFGPCPKELWPTPKCRKMCQLKYNVAYKDDKIYG
NDAYSLPNNETRIMQEIFTNGPVVGSFSVFADFAIYKKG VYVSNGIQQNGAHAVKIIGW
GVQDGLKYWLIANSWNNDWGDEGYVRFLRGDNHCGIESRVVTGTMKV*

Figure 64B

ATTTTCAATGACCAAGCTCCTCGTAAGCACCGCCGGGTTGACTGGCGTCGTCGCGGCCC
TCTTCATCACTTCTCTGGTTTTTCAGCATCCTTACATGGACACGTGTAAAAAATGACAAC
GATAACCCACCAAGACCTAAGGAGCCACTCAGTCGTCCAGTAGTGCAATTGTCTTCATC
TATTTCAGACTACCGTAACCGAAAATGTAGTGACAGAACCCTAGTGACTGTGCCGACAG
TGTCACGCACCAGAGTTTCGGCAAAAACAATATCACCGAGAAGTTCCGCGACAACGTCA
ACTCGAACGCTTCGAACCTCTCACCACACCGAAAATTCGTTCGCAACGGAGGCCGACCGCG
ACGTAATCGTACGATAATGTGTCCGAACCTATGGAGTTTTTCAGACAACCTCATACGCATACC
AGGAAGCAGCATCGTTCATTCTTAGTGGCCTCGACGAACGTGTCAATCCGTGCGAAGAT
TTCTACGCTTTCACTTGTAAACAAGTTTTCTAAAAGATCATAAGGCTGAAGAACATGGGGT
CAGTCGTTACGGAGCTATAAAAGAACTTCAAGATGCAGTGAACACAGAAAATAGTTGACG
CCCTCTTCGATGTGGATGTGAACGATAAGAAGCGGTGAGAAACAGAGAGAATAACGAAA
GCGCTTCTCCACGACTGCGTTTACCACATCTCGCCTAATGTTCCGACCGAAACAATCAT
TAATTTCCCTTGAAGAAATTGCAAGAATGTTTGGAGGTATACCGTTCTCAACCACACTC
TAAAAGAAGATTTTGACGTTTTTCGTGCAATGGGAGAAGTCGAACAAAATCACGCGATG
GGTACGCTTTTCAGCGCAATGGTTTCGGTCGACTACAAGAAGATCAAACAGAATTCACT
GTTCTTATCACAGCCTCGGCTTCCGATGCCAAGAGAATTCTACGTGCTTCCACAGTTTA
CGATGAAGCTTAAAAAACGTGGACTTCAAATTGCTGACGTTTTAAAGAAAATTTGCCGAG
AAGATCTTAGAAGAACCCGATAAGTATAGGGATATGATAGAAAAGGCTGCGCAAGATGT
TGTGGAAGTAGAGAGGAGGATCGCTCTGGCGTCTTGGGCAGATGCCGAAATGAGAACT
ACGCACAACAGTACAATCCCTACGATCTGCCCCACTTTGAAAAAGGCGTATCCATCTGTC
AAATGGGAGAGCTATCTACGTAGCCTTTTGTCAACCGTCGGTCCAGTCGATTTTTCTGG
TCCACATAAACGGCTCATAATCTCGCAACCGTCGTATTTTGGGTGGTTGAATGCTCTCT
TCAATGGTAACGTTGTTGACGAAAATACGATAGTAACTATATAATCACGCACTTAATC
TTCGAAGATGCGGAATTCCTTGGTGGTATATTTAAAGAATCTGCAGAGGATTTAAATTA
CGTCCGGTATGCGCAGAGAAGTGGCAGAGGAGTTGCCCGAGTTGGAAGGCAACTTATGC
ATCAAAGAGATACCAGGGGCGACCCGAATATCCCGTGCATGAATTTTCATCATGACGTAC
ATGCCGTATGGACCTGGTTATGTCTATGTAAGAAGCAAACAGCAGAGAAACGATGTTCA
AGCAGACATTAGGAAACAAACAGAACTCGTCATCGAGAGCTTTCTGAATATGACTTCGG
GCCTGAAGTGGATGTCTTCGGATTGCAAAGAAAAAGCTAGACAGAAGGCTAAGGGTATG
GTGAGGAAGTACGGATGGCCTCAAAAACCTTTCGGAGACTTTAAAAGCAGCGAAGAGAT
TGATGAATATCACAAGAAGGATTATGCTGAAATCCTTGAGCTTACCAAGACGGAGAGGA
GCAGCCTTCGATATTACCGTATGCGCCGGGTGCTGATTAAAGGATATTCAAATCGCGAG
TCACTGCGTTTTACTTTTGCAGGATGCAGACAGGTCCAATTTCTCCTATCACCAGCGTT
AGTGAGCGCCTGGTACCAGCCGGAAGGAACCTCTACTTTCCCTTACGCGAGCTTCA
ATCCACCGTACTATAGCTATGAATATCCTCAAGCTTACAACATATGGTGGTCAGGGTGGA
ACTGCCGGTCATGAGCTAGTCCATGGATTTGACGACCAAGGAGTGCAGTTCGGTCCCGA
TGGAAGTCTAAGTAGGTGTACGTGGTATGATTGTGGATGGATGGATAAAAGATCAAAG
ATGGTTTCAACGACATGGCCCAATGTGTTGTAACACATTATAGCACTTTCTGCTGCCCA
GAACAGGAAGGTAAATATACACTGCGCAAATGGTGCAACCACACAAGGGGAAAATATTGC
TGATATTGGAGGTGAACATGCTGCATACATAGCATATCGAGAGTACATCAAATCACTAG
GACATGAAGAGAAAAGATTGCCAGGATTAGAACGATACACACCAAACCAGATCTTTTGG
ATTACATATGGATACTCATGGTGCAGGAGCGTAACAGAGGAATACCTTATTAGTCAACT
TCTCACCGACCCCCACGCACCAAGTGCTTGCCGCACTAACCAAGTAGTCCAAAGTATCC
CTGCGTTTTGGACGGGATTTTCGGGTGCTCATTAGGAGACAGAATGTATCCTGCACCAGAG
CAGCGATGTTTCAGTTTGGGTTCAGAGTAAATGGTTCGACGAAACTGTCGGATTTTATG
TTTCAGTCGGATTATAACACTATCAACTAAACATTTTCGTTCAAAAAAAAAAAAAA

Figure 65A

MTKLLVSTAGLTGVVAALFITSLVFSILTWTRVKNDNDNPPRPKEPLSRPVVQLSSSIQ
TTVTENVVTEPIVTVPTVSRTRVSAKTISPRSSATTSTRTLRLTTPKFVATEAAPRRN
RTIMCPNYGVSDNSYAYQEAASFILSGLDERVNPCEDFYAFTCNKFLKDHKAEEHGVSR
YGAIKELQDAVNTEIVDALFDVDVNDKKRSETERITKALLHDCVYHISPNVPTETIINF
LEEIARMFGGIPFLNHTLKEDFDVFAAMGEVEQNHAMGTLFSAMVSVDYKKIKQNSLFL
SQPRLPMPREFYVLPQFTMKLKKRGLQIADVLKKFAEKILEEPDKYRDMIEKAAQDVVE
LERRIALASWADAEMRNYAQQYNPYDLPTLKKAYPSVKWESYLRSLSTVGPVDFSGPH
KRLIISQPSYFGWLNALFNGNVVDENTIVNYIITHLIFEDAEFLGGIFKESAEDLNYVR
YAQRSGRGVARVGRQLMHQRDTRGDPNIPCMNFIMTYMPYGPYVYVRSKQQRNDVQAD
IRKQTELVIESFLNMTSGLKWMSSDSKEKARQKAKGMVRNYGWPQKLFGDFKSSEEIDE
YHKDYAEILELTKTERSSLRYRMRRVLIKGYSNRESLRLLLQDADRSNFLSPALVS
AWYQPERNSITFPYASFNPYPYSYEYPQAYNYGGQGGTAGHELHVGFDQGVQFGPDGS
LSRCTWYDCGWMDKRSKDGFNMAQCVVTHYSTFCCPEQEGNIHCANGATTQGENIADI
GGEHAAYIAYREYIKSLGHEEKRLPGLERYTPNQIFWITYGYSWCRSVTEEYLISQLLT
DPHAPSACRTNQVVQSI PAFGRDFGCSLGDRMYPAPEQRCSVWVQE*

Figure 65B

GAAAAGCCTACGCAGTCATGCTCAAACCTCGTCGCCCTAGCCTGCTTAGCTGCGATCTGC
CTCGCTCAGGGTGGACCCGAAGGACCCCTCCTTTCTGAAGAGTGCTCCCCCGAGAA
GGTGAAGGAATTTCGACGCTCTTTTCGCCGATGCTGGAGGTCTGACTGATGCCAGATCG
ACGCTAAGGTCAAGGGATGGATCGGAAAGCAGAGTCAGGATATCCAGAACGCATTCAAT
GCCTTCGAGAGTGAGGTGAAAGCCGCCAGCAACAGGGTGAGCAAGCTCACCAGGCTGC
TGTCGCCAAATTTCAGCGCTGAAGCCAAGGCTGCCGACGCCAAGCTCACCGCTATCGCCA
ATGACGCCTCCAAGACGAATGCACAGAAGGGAGCCGAGATCGACGCCGTTCTCAAGGGT
CTTCCACAAAAAGTCCGTGATGAAATCGAGAATGCAATGAAGGGATAAGAGGGCGTTGT
TTTGTATATATGAACCGATAAATATGCAAAATAAATATCTCCCCTTCAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAA

Figure 66A

MLKLVALACLAACLAQGGPEGPPFLKSAPPEKVKEFDALFADAGGLTDAQIDAKVKG
WIGKQSQDIQNAFNAFESEVKAAQQQGEQAHQAAVAKFSAEAKAADAKLTAIANDASKT
NAQKGAEIDAVLKGLPQKVRDEIENAMKG*

Figure 66B

CAGTCATGCTCAAACCTCGTCGCCCTAGCCTGCTTAGCTGCTATCTGCCTCGCTCAGGGT
GGACCCGAGGGACCCCCTCCTTTTCCTGAAGAGTGCTCCCCCGAGAAAGTGAAGGAATT
CGACGCTCTTTTCGCCGATGCTGGAGGTCTGACTGATGCCCAGATCGACGCTAAGGTCA
AGGGATGGATCGGAAAGCAGAGCCAGGACATCCAGAATGCATTCAATGCCTTCGAGAGT
GAGGTGAAAGCCGCCCAGCAACAGGGTGAGCAAGCTCACCAGGCTGCTGTCGCCAAATT
CAGCGCTGAGGCCAAGGCTGCCGACGCCAAGCTCACCAGCTATCGCCAATGACGCCTCCA
AGACGAATGCGCAGAAGGGAGCCGAGATCGACGCCGTTCTCAAGGGTCTTCCACAAAAA
GTCCGTGATGAAATCGAGAATGCAATGAAGGGATAAGAGGGCGTTGTTTTGTATATATG
AACCGATAAA

Figure 67A

MLKLVALACLAATICLAQGGPEGPPPFLLKSAPPEKVKEFDALFADAGGLTDAQIDAKVKG
WIGKQSQDIQNAFNAFESEVKAAQQQGEQAHQA AVAKFSAEAKAADAKLTAIANDASKT
NAQKGAEIDAVLKGLPQKVRDEIENAMKG*

Figure 67B

1 tttgagatgt ggattctcgc tgcattagt gtaacggcac ttgccgcaaa accgactacg
61 gttgaggagt tccacgctca accatatagag gagcacgtta aagacctcag tggacaagct
121 tttgttgact acatcaacga gcatcaatct ttctataggg cggaatatcc accagaggcg
181 gaagcgttcg tgaagctcg gataatggac tcgaagtatt tagtgaacc taagaaagaa
241 gaagtgtcgg aggacgtata tggcaatgat ccgccctgca gcttcgacgc tcgcacccac
301 tggcctgaat gcagatccat tggcaccatt cgtgaccagt catcatgcgg ttcatgttgg
361 gcagtatcct cagcgggaag catgtcggat gaaatatgtg ttcagtcgaa cagtacgata
421 aggtgatga ttccgactc agatatactc tcgtgctgtg gaatttcctg tggatatgga
481 tgccaagggtg gttggccgat cgaagcatatc aaatggatgc aacgtgacgg tgttgttaca
541 ggtggaaaat acagacagaa gaaagtgtgc aagccgtacg ccttctatcc gtgtgggcac
601 caccaaaatg accctacta tggaccttgc ccagggggtt tatggccac tccaaaatgt
661 cgaagacgt gtcagcgaat atacaacaag tcctaccaag aagacaagca ctttgcaacg
721 agggcctact acctcccgaa taatgaaagg aacatcaggc aagagattta caagaacgga
781 cctgtggtcg cagctttcag agtctaccag gacttcagtt attacaaaaa aggaatctat
841 gtgcacaagt ggggtgtgca aacaggagca catgctgtca agtcgttgg ttggggcaga
901 gaaaatgcaa cagattactg gctgattgca aactcgtgga acactgactg gggagaaaagc
961 ggctatttcc gtattgttcg tsgaactaac gagtgcggta tcgaagcaca aatggtcgg
1021 ggagcgatga gagtgtgaaa tactcgacta tgacgccgtt ctttaaatcgg ctatcgtaat
1081 gaatcattct gag

Figure 68A

MWILAAVLVVTALAAKPTTVEEFHAQPIEEHVKDLSGQAFVDYINEHQSFYRAEYSPE
AEAFVKARIMDSKYLVEPKKEEVLEDVYGNPPASFDARTHWPECRSIGTIRDQSSC
GSCWAVSSAEAMSDEICVQSNSTIRVMISDSILSCCGISCGYCGQGGWPIEAYKWM
QRDGVVTGGKYRQKKVCKPYAFYPCGHHQNDPYGCPGGLWPTPKCRKTCQRKYNK
SYQEDKHFASTRAYYLPNNERNIRQEIYKNGPVVAAFRVYQDFSYKKGIYVHKWGGQ
TGAHAVKVGWGRENATDYWLANSWNTDWGESGYFRIVRGTNECGIEAQMVGGAMR
V*

Figure 68B

TTTAATTACCCAAGTTTGAGCAGCATGCCATACCTCGCATTTCATTGTCGCACTACTAGC
CTGTACTGTTATGTCGGGTCACGGTCAAATGACGGGAGGATTAACGAAGCAGGATCCCA
ATGATCCTGAACACATGGCTAGAGCATGGAAGGCCGCAAAAGGCATCAATGAGGACGCT
TCTAACGCTGGACCGTACCACATGATTCCTATTAAGATCGTAAAGGCCGAATCTCAAGT
TGTCGCTGGAGTTAGGTACATATTTGAAGTGCTGTTTCGGCGAATCCACGTGTAAGAAAG
GACATATGGCTGCAACCGAACTTTCTGCCTCCAACGTGAGCTGAAAGAAGGAGGAAAC
CGAGCTCTATACAAAGTTGAGCTTTGGGAGAAGCCATGGGAAAACCTTCGAGCAGTTCAA
CGTGGAGAAGATCCGAAATGTTGCCGCCGGCGAGCAAATCTAGCCGCTTCTTTAAGACA
CCTCACTGCGCCGGCGTCTATAT

Figure 69A

MPYLAFIVALLACTVMSGHGQMTGGLTKQDPNDPEHMARAWKAAKGINEDASNAGPYHM
IPIKIVKAESQVVAGVRYIFEVLFGESTCKKGHMAATELSASNCELKEGGNRALYKVEL
WEKPWENFEQFNVEKIRNVAAGEQI*

Figure 69B

TTAGTTTTGCAAGGGTTTGGTGCAGGAACTGGGATCAACTTCGAGTTTGCTAACGAGA
CTCTTAACCGATCCTCATTACCAGCACCTTATCGCGTTCTTGGAACGCTGCAGAACTT
CCCCGCATTTAAAGAAGCCTTCAATTGTCCGAAATCACCTTACGCACCAGATAAACACT
GTAACGTCTGGGTATCGGAGCTAGATACATCACATGGTGAGCCCCAAGGTAAAAACAGAG
CTGAATATAGCGGCGCCTCCACAGATCACTCCGAACGACAAGGAAAAGTATGATGCCGC
CAAGGTGGCCATCAGTTTCTTTCAGGAATCCGTCAATACCTCTGTTGATCCATGTGAAG
ATTTCTACAAGTATGCTTGCGGAAAGTACCAAAAAGCGGTCTCCTTCCACTATGCCGAC
GCTAAAAACCTCGTAGCAATGGCTAACCAATTGACAAATAAGGACTACCAGAAAGTTAT
CAAGAGCTCAACAGCATTAAACCAAGGAGAAGGCGTTCTTCGATGCGTGCGTAGCTGCAA
CGAAAGACTCTGGTCACAATAATCAGATCCTCATTCCAATAATTATCTCATGAAACGA
GTAAGGAAGTTGGCTGACTACCTTGGAGCTGAGTTTACCTATGCACCTGGCGGCAGAGT
GGAGCGACTGCCCAATAAGGTTTCAGCTGGCAAACGCTTTGGGTTACCTCTCCTTTGACC
AGAACATTCAAACGCTGGTGACACCTCTTGTCGACACATATTGGCCAGACCCGAATAAA
GGATACACGATGTTCTCGATCAGAATACTGCATATATGAGCAAGACTTTCTACCACCC
GGATGCTTTCAAACCATTAAGGAAAACCTATATTAATTCTGCGACTAAGGTCATAGAAA
CGTTTCGTAAAAACTCAGAATAAACCGATTGATCCTAAACTCAAGGATAAGGTGAGAGGC
CTGGTGGAATTTGAACAAATGATCGCGAACAAGTACAGCACCGATGATGACACACGCCG
AATCTACTTTCGATCATGGAATCTCAGAAGCATTAGGGAGCTACAGAACCAATTTGGTT
TCGTTGATTGGCAAACATATATGAAGATGGTTCCCATGGTTGCGCAAACAAGGTGCAA
TCTGCGGATTTAGAGTTTCCGTTCATGGAGCCGGGTCAGTACGCCAACATGAGTCGTGA
TTATGCTGGATTTGACAAAGAAAACTAGTGAACACTTGTATGCGCCTGCTGCTAT
CTAATGCTCAGTATTTGCCAACCTATGCCAGCAGTTTCAAAGAGATGCCGGAAGAACCA
CTAGTTCTTGGACGGAAGCGACGCAACATCCATTTCTCAAATCCGACACCCTTACTGA
TACGCAAGCGAATTGTGCAAAGGTGGCGAATGAGCTGATGATGTTTGCGAATGGACGAG
TTTTTCGTCGACTATGTGTATCCCGACGAGAAATACAAGGACCTAATAAGGAGCAGTGCT
GGTGGTGTGATGCACAATGTTATCCATGCTTTCCAAAGCATGGTTGATCAACTTGACTG
GATGAGCGAAGCGACAAAGAGAAAAGCAATAGAAAAGAGCATGAATATCATAACAAACA
TAGCTTTCCCGGATTGGATTATGGACAACGCAAAGTTGGACCTGTATTACAAAAGCATC
ACCTTCGACCCAACCAAGGAAAACCTACTACGATATTTGGACAAAGCTTACCATATTCAA
TATAGAAGCTCAGTACAAGCACTTAACAATGGCCACAGCTGATTACGAAGAATTCCCTTA
TGCCGCCAGGTATTGTTAATGCATGGTATCAGCCGGAATTGAATACGATCACATTCCCC
GCTGGAATACTTCGTCTCTCTTATTTCCATCCTGATTGGCCAGCATCAATCAAATACGG
TGGAATTGGTCTAATAGCAGGACATGAACTGATTCACGGCTTTGACGATCAAGGTGTTT
AGTGGGGTCCAAAGGGACACATCTCTTACCCAGAGAAGAACTGTATTGGATGGATGGAT
GAGCAATCAACGAAAGGTTTCAATCGCTTGGCTCAATGTGTTCATCGATGAGTATAGCAC
GTTCTGCCCTCTTGACAACAGGACATACACACCAAATTGTGTGAATGGAGCGCAGACCC
AAGGAGAGAACATCGCCGATAATGGAGGGGTACACGCGGCGTTCCGCGCTTACCGTACA
CACATCTCTCTCAATGGACCAGATCCACAGCTTCCTGACAGACTGTTCTGGGCAGTTTAC
ACATGATCAGCTGTTCTTCTTGAACCTTCGCACAGGTGTGGTGCGAGAAACGACGAGTCG
ATGACAGACTTTACCAGCAGCTCATGGTTGACCCCCACTCTCCAGCGATGTACCGAGTG
TTCGGTACTCTTCAGAACTATCCGGCCTTCAGAGCCGATTCAACTGTCCGCTTAATTC
GCGATACGCTCCTAAGGATCATTGCAATGTTTGGGTGCCGAATTATATGCCATAAGAGG
AAGTTCTTCTTGAAAACCTACTACTCAACATAAATAAAGTCTGTGATTTTAAAAAAA
Aaa

Figure 70A

SFARVWCRKLGSTSSLLTRLLTDPHSPAPYRVLGTLQNFPAFKEAFNCPKSPYAPDKHC
NVWVSELDTSHGEPKVKTELNIAAPPQITPNDKEYDAAKVAISFFQESVNTSVDPCED
FYKYACGKYQKAVSFHYADAKNLVAMANQLTNKDYQKVIKSSALTKEKAFFDACVAAT
KDSGHNNQILISNNYLMKRVRKLADYLGAEFTYALGGRVERLPNKVQLANALGYLSFDQ
NIQTLVTPLVDTYWPDPNKGTYMFLDQNTAYMSKTFYHPDAFKTIKENYINSATKVIET
FVKTQNKPIDPKLKDKVRGLVEFEQMIANKYSTDDDTTRIYLRSWNLRSIRELQNQFGF
VDWQTYMKMVPMAQNKVQSADFRVSVMEPGQYANMSRDYAGFDKEKLVNYLFMRLLLS
NAQYLPYASSFKEMPEEPLVLGRKRRNIHFSKSDTLTDTQANCAKVANELMMFANGRV
FVDYVYPDEKYKDLIRSSAGGVMHNVIAHAFQSMVDQLDWMSEATKRKAIEKSMNIITNI
AFPDWIMDNAKLDLYKSITFDPTKENYYDIWTKLTI FNIEAQYKHLTMATADYEEFLM
PPGIVNAWYQPELNTITFPAGILRPYPFHPDWPASIKYGGIGLIAGHELIHGFDQGVQ
WGPKGHISYPEKNCIGWMDEQSTKGFNRLAQCVIDEYSTFCPLDNRTYTPNCVNQAQTQ
GENIADNGGVHAAFRAYRTHISLNGPDPQLPDRLFQGFTHDQLFFLNFAQVWCEKRRVD
DRLYQQLMVDPHSPAMYRVFGTLQNYPAFRAAFNCPLNSRYAPKDHCVWVPNYMP*

Figure 70B

ACAGATGAGATCTCTTTGCCTGCTGCTCGCTGTGGTGCTTGTCGCCGTCCACGCAAAAA
TGCAGAACGTCAACGTCAAGGGGACCACCATCTGCAACAAGAAGCGAATGGCCGATGTG
ACGGTGGAAGTGTGGGAGAGAGACACCCTCGACCCCAACGACCTCCTCGACTCCAAGAA
GACCTCTAGGGAAGGCGAGTTCCTCGGGAAAGGTGGTCAGAACGAAGTCGGCTCGATTG
AGCCATTCCTCAAAATTACACACACCTGCAATGTCAAGAAACCGGGCTGCAAGAGAATC
ACTGAGTTCGACATCCCGAAGTCGAAGATCGACACGGTCTACGACATGACCTACGTGAC
GCTGGATATCATTTCCGCAGTCGATAAGGAGAAGTGCTACATGAACGCGTTGTTTTCCA
CGGCAATATTTTGTATAGACAGATGAACATTCCTTCCGAAAAAAAAAAAAAAAAAAAAA

Figure 71A

MRSCLLLAVVLVAVHAKMQNVTVKGTTICNKKRMADVTVELWERDTLDPNDLLDSKKT
SREGFLGKGGQNEVGSIEPFLKITHTCNVKKPGCKRITEFDIPKSKIDTVYDMTYVTL
DIISAVDKEKCYMNALFSTAIFCIDR*

Figure 71B

AGTGCCATTGCCGAGGGATGGCTCGCCTTGTACTGTTACTCGCACTATTTACCCTGGCT
GTGGCCAGCGTCCACAGGAGGACATTCCACCAGCCGCGTCGTTACGTGAAGTCGGTGTC
GCTTTCGCGTCAACCAACACTTCGTGAACGATTGCTGGGAACTGGCAGTTGGGAGGACT
ACCAGAAGCAACGCTATCACTACCAGAAGAACTTCTGGCAAAATATGCGGCAACAAG
GCGTCGAAACTACAGTCCACCAATGAGATTGACGAGCTCCTTCGTAACATATGATGTC
ACAATATTTGGCACCATCCAAATCGGAATCCAGCGCAGAATTTACAGTGATTTTCG
ACACCGGTTTCATCCAACCTCTGGGTGCCGTCCAGGAAATGCCCATTTCTACGACATCGCG
TGCATGCTTACCACCGCTACGATTCTGGAGCATCGTCAACGTACAAGGAGGATGGACG
TAAGATGGCTATTCAATATGGAATGGCTCAATGAAGGGCTTCATTTCTAAGGATAATG
TCTGCATCGCCGGAATTTGTGCTGTGAGCAACCGTTTCCGAGGCAACGAGCGAGCCA
GGCCTCACGTTTCATCGCTGCGAAGTTCGACGGAATCCTTGGCATGGCCTTCCCTGAAAT
CTCCGTTCTCGGTGTACCACCAGTATTCCACACGTTTCATTGAACAGAAGAAAGTGCCGA
GCCCCGGTGTTCGCTTCTGGCTCAACAGAAATCCCGACTCGGAATCGGAGGGGAGATC
ACCCTCGGTGGAATGGACCCCCGCCGATATGTTGAGCCGATCACATGGACCCCAGTAAC
TCGACGAGGATATTGGCAGTTCAAGATGGACAAGGTTCAAGGAGGATCAACGTCCATTG
CCTGCCCCAACGGATGCCAGGCTATCGCTGACACTGGTACTTCACTGATTGCCGGACCT
AAGGCTCAAGTTGAGGCTATCCAGAAATTCATTGGTGCTGAGCCACTTATGAAGGGAGA
GTACATGATTCCTTGCAGACAAGGTGCCTTCCCTCCCGAGCTGTCCTTCGTTATCGAGG
GCCGGACTTTCATCCTCAAGGGTGAAGATTACGTATTGACCGTGAAAGCTGGTGTTAA
TCGATCTGCCTGTCCGGTTTCATGGGAATGGACTTCCCGGAGAGGATCGGAGAGCTGTG
GATTCTTGAGACGTCTTCATTGGAAAGTACTACACTGTCTTCGATATTGGCCAAGCTC
GTCTTGATTTGCTCAGGCTAAGTCAGAAGATGGCTATCCGGTTGGTCTGCTGTTTGA
AGGTACAACAAGTTCTCGGAGGACAGCGACAGTACGAGGATGATGTATTCACTCTCTA
AATAACATGTATCCACAATTTGCTCTAATCTCGATACGTGTACCGTGTCTCACGTGTTT
CCACTTTTGATAAACTGATTATTCTG

Figure 72A

MARLVLLLLALFTLAVASVHRRTFHQPRRYVKSVSLSRQPTLRERLLGTGSWEDYQKQRY
HYQKLLAKYAANKASKLQSTNEIDELLRNYMDAQYFGTIQIGTPAQNFTVIFDTGSSN
LWVPSRKCPFYDIACMLHHRYDSGASSTYKEDGRKMAIQYGTGSMKGFISKDNVCIAGI
CAVEQPFAEATSEPGLTFIAAKFDGILGMAFPEISVLGVPPVFHTFIEQKKVPSPVFAF
WLNRPDSELGGEITLGGMDPRRYVEPITWTPVTRRGYWQFKMDKVQGGSTSIACPNGC
QAIADTGTSLIAGPKAQVEAIQKFIGAEPLMKGEYMIPCDKVPSLPELSFVIEGRFIL
KGEDYVLTVKAGGKSICLSGFMGMDPPERIGELWILGDVFIGKYYTVFDIGQARLGFAQ
AKSEDPVPGPAVRRYNKFSDESDSDEDDVFTL*

Figure 72B

GGTACTGCAGGGTTTAATTACCCAAGTTTGAGGAGCATGCCATACCTCGCATT
CATTGTCGCACTACTAGCCTGCACTGTTATGTCTGGTCACGGTCAAATGACGG
GTGGATTAACGAAGCAGGACCCCAATGATCCTGAGCACATGGCGAGAGCATG
GAAGGCGGCGAAAGGTATCAATGAGGATGCATCCAACGCTGGACCGTACCA
CATGATTCCCATTAAAGATTGTCAAGGCTGAATCTCAAGTCGTGGCTGGGGTTA
GATACATATTTGAAGTATTGTTTCGGCGAATCAACATGTAAGAAAGGACATAT
GGCTGCAACAGAGCTTTCTGCCTCCAACTGTGAACTAAAAGAAGGAGGAAAC
CGAGCTCTGTATAAAGTGGAGCTCTGGGAGAAGCCATGGGAGAAGCTTTGAGC
AGTTCAATGTTGAGAAGATCCGAAATGTTGCTGCTGGCGAGCAAATCTAACC
TGCTTCTTTAAGACACCTCACTGAATATTGAATATTTTGTATGTCATGTATAAT
ACGACGCGATTTTTTTTATCTCACGTACTTTTTTCACTGTGACAATTGCCTTCT
CTGC

Figure 73A

MPYLAFIVALLACTVMSGHGQMTGGLTKQDPNDPEHMARAWKAAKGINEDAS
NAGPYHMIPIKIVKAESQVVAGVRYIFEVLFGESTCKKKGHMAATELSASNCELKE
GGNRALYKVELWEKPWENFEQFNVEKIRNVAAGEQI*

Figure 73B

GAAAAGCCTCCATAGTCATGCTCAAGCTCGTTGCACTCGTTTGCCTGGTTGCA
ATCTGCTTCGCTCAGGGACCACAAGGACCCCTCCGTTCTTGCAAAGTGCTCC
AGCGGCTGTTCAACAAGACTTCGACAAGCTCTTCGTCAATGCTGGCTCCAAG
ACTGATGCAGAAATCGACAAAATGGTCCAAGATTGGGTTGGCAAACAAGATG
CATCCATCAAGACCGCATTCGATGCGTTTCGTGAAGGAAGTGAAAGCCGCTCA
AGCGCAAGGTGAAGCTGCCCATCAGGCTGCTATCGCCAAGTTCAGCGCAGAG
GCCAAAGCGGCTGATGCCAAGCTGAGCGCAATTGCGAACGACAGGTCTGAAG
ACAAACGCGCAAAAGGGAGCTGAGATCGACTCGGTACTCAAGGGACTTCCTC
CAAATGTCCGCACAGAGATCGAAAACGCCATGAAAGGATAAGAAGTCTCTAT
TTTGTATATATGAACCGATAAATATGCACAATAAAAAAAAAAAAAAAAAAAAA
AAAAAAA

Figure 74A

MLKLVALVCLVAICFAQGPQGPPFLQSAPAAVQQDFDKLFVNAGSKTDAEIDK
MVQDWVGKQDASIKTAFDAFVKEVKAAQAQGEAAHQAAIAKFSAEAKAADAK
LSAIANDRSKTNAQKGAEIDSVLKGLPPNVRTEIENAMKG*

Figure 74B

GAAAGGTTTAATTACCCAAGTTTGAGGATGAAGATTGCCCTGGTTGTTCTGCTGTTAGT
CGCCTACGCAAATTCTGCGGACATCTTCAGAACTGAATTTGGAGCTAAAATAAAAGCAG
AGGCGGATAAAAAGTAAGACGAACTAAATATCTCCTCTCTTCTTCAAGTCCGTGGGAAA
TTCCTCAAGTTAAGACAACAGATCAAGGAGAGCTTAGCTCTGACCCCGGAACGAAAAGA
GTTGTTGCATAAGTTGATGCAGAAATTAGTACACATCAAAAAGGATCATGTTTCATAAGG
GTGGTGAATCAATCGATGAAATCAATAAGAAGGTTGGAATGTCAGATCTGCTCTACGAT
GGTGATATGGTTCTAACGAAAGAGCAAGCCGAGGAAATGGTTAGCGATATCGACGGAAG
TGGAAGCAACCGTGCAAAGCGTCAAGCGTATCGTAACAACTTTATCCGAAAACACTTT
GGACCGATGGAGTTATCTATTATTTCCATCCTAGTGCAACGAATAGCATGCGAAGTGTG
TTCCTGAAAGCAGCAAAGAATGGAGCTCTCAAACGTGTATCGATTTCCATGAGGATGT
GGTTGGAATGGGCCCCAAACAGGATCAAGGTTTTCAAAGAGAAAGGTTGTTGGTTCGATGG
TTGGACGACTCCCTCGTCCACAGGAGCTTTCGTTGGGAAGAGGATGTGATACGATTGCC
ACAGCACAACACGAGATCGGCCATGCGCTGGGATTCTTCCACCAGCAGGCTAGACACGA
TCGCGATGACTACATTGTATTTAATTCAGAGAATGTAGTGCCGCGATATCTGGATCAAT
TCAAGAAACAGAGCAAAGAAACAAACGATAATTACGGATTAACCTATGATTACGGAAGC
ACCATGCAGTACGGATCGACCAGCGGATCCCAAATGGAAAACCTACAATGGTGCCAAA
AGATCCTAAATATATAGAAACCCTGGGATCACCTTTCATTGCATTCTACGATTTACTGG
CAATAAATACGCACTACAAATGTCTTGAGAAATGCGATAATAATGGGGCACAAATGCAAA
ATGGGTGGATTCCCTAATCCAAGAGATTGCTCAAATGCATTTGTCCCAGTGGATACGG
TGGCGCTACATGTGACCAGAAACCTGAAGGATGTGGTGAAGTACTTGAAGCAACGAAGG
AGGCTAAACCCCTCAAAGTGAAATTGGAGATAAAAGTGCAGGAGATGAGGACAGAGAG
GACATGACCAAGTGTTACTATTGGATCAAGGCACCGGAAGGATCGAAAGTTGAGGTTAA
GATCGTAAACCTAGCTAAAGGTCTTGCCATTGATGGATGCAGATATTGGGGTGTGGAAA
TAAAACTCAGGAGGATCAACGTGCTTCCGGATACAGATTCTGCGCTCCCGAAGATGCT
GGCGTCACTTTGGAGTCGCACTCGAATATTGTCCCTATAATAGCGTTCAATAGACACGG
CTCTACTGAATTTGAATTACAGTACCGAATCGTATAATTCTGCGTGACCAACGCTTCTC
CTAAGAGACGAGAAAGTTCTGCAACAATACTTTATTTCATGTATAACAATATAGGAGAGT
TTTTCTTAGTAGAAGTACTTTCTTTGTTGGTTCTCCAGAAATAAACGATTTCCATGCAA
AAAAAAAAAAAAAAAAAAAAA

Figure 75A

MKIALVLLLLVAYANSADIFRTEFGAKIKAEADKSKTKLNISSLLQVRGKFLKLRQQIK
ESLALTPERKELLHKLMQKLVIKKDHVHKGGDSIDEINKKVGMSDLLYDGDMLTKEQ
AEEMVSDIDGSGSNRAKRQAYRNKLYPKTLWTDGVIYYFHPSATNSMRSVFLKAAKEWS
SQTIDFHEDVVGMPNRIKVFKEKGCWSMVGRLPRPQELSLGRGCDTIATAQHEIGHA
LGFFHQARHDRDDYIVFNSENVVPYLDQFKKQSKETNDNYGLTYDYGSTMQYGSTSG
SQNGKPTMVPKDPKYIETLGSPFIAFYDLLAINTHYKLEKCDNNGAQCKMGGFPNPRD
CSKCICPSGYGGATCDQKPEGCGEVLEATKEAKTLKSEIGDKSAGDEDREDMTKCYWI
KAPEGSKVEVKIVNLAKGLAIDGCRYWGVIEIKTQEDQRASGYRFCAPEDAGVTLESHSN
IVPIIAFNRHGSTEFELQYRIV*

Figure 75B

ACTTCAAGCGATGTTCCGTCCTGCTACTGCCGTCCTTCTATTGTTGGCCGCGTCCAGCA
CATTTGCTGGATTTTTTCGATGATGTTGGAGGCTTACCCAGTGGTGTGGGAGATTTTTTC
ACAAAGCAGTTCAACAATGTGAAGGATCTTTTTGCTAAAGATCAAGATACTCTTGAGAA
GAATATCAATCTGGTAAAGGATCTATTGATTGCCATTAAGGAGAAGGCTAAGATGCTGG
AACCGATGGCCAACGAGGCTCAGAAGAAGACATTAGGGCAGGTGGACAACCTATCTCAAT
GAAGTTCAACAGTTCGGCGATCAGGTAGCCAAGGAGGGTTCTACGAAATTTGAGGAGAA
CAAAGGGAAATGGCAGCAAATGTTGAACGATATCTTCGAGAAAGGTGGACTGGACAGCG
TGATGAAGTTGCTCAATCTGAAGTCCGGCGGTCGCTGCACGTTAGCCGCTGCACTCGTC
GCTCCCGTTGTGCTCGCGCTCATCCGCTAATTCACCTTCTACCGCCGCCGACTACTGTAG
TTTACCCTGTGCCTGTGTGTGATATGTGGATTTGTGCATGATGTGTATCTATGATTTGT
GATTTATTTTTCTCTTGTACTTCCATGAATTCAGCTCTGGTATTCTGAGACGGACCAAC
ATCTCCGCAGTACTTTTTTGTATTGTTATCATCACCGTAATCCTGTGACTGGCGTAAAA
TGTTTAGTTTTCCGATAAAAATACATTTCGAAAAAAAAAAAAAAAAAAAAaa

Figure 76A

MFRPATAVLLLLLAASSTFAGFFDDVGGLPSGVGDFFTKQFNNVKDLFAKDQDTLEKNIN
LVKDLLIAIKEKAKMLEPMANEAQKKT LGQVDNYLNEVQQFGDQVAKEGSTKFEENKGK
WQQMLNDIFEKGGLDSVMKLLNLKSGGRCTLAAALVAPVVLALIR*

Figure 76B

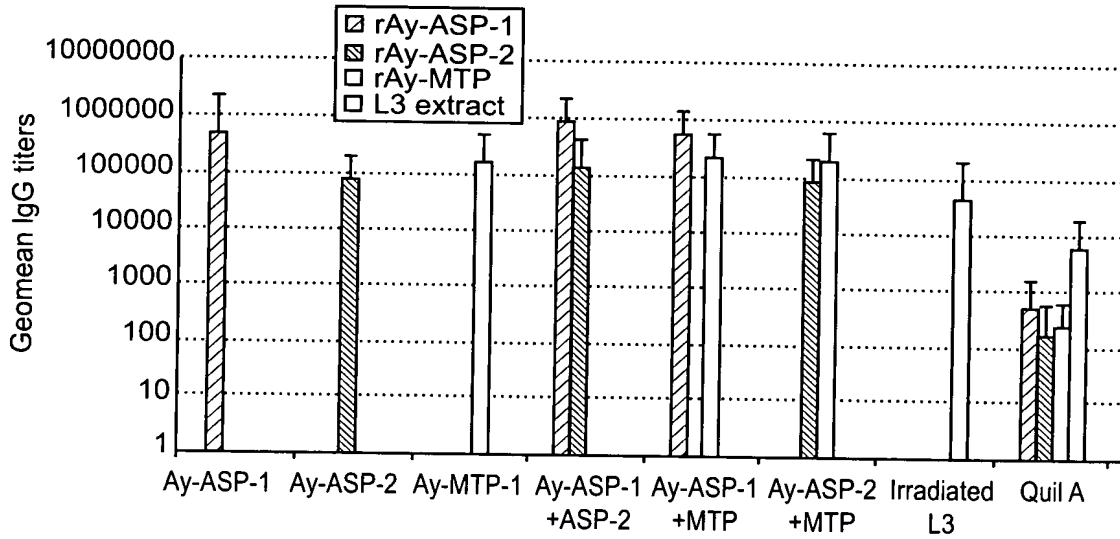


Figure 77A

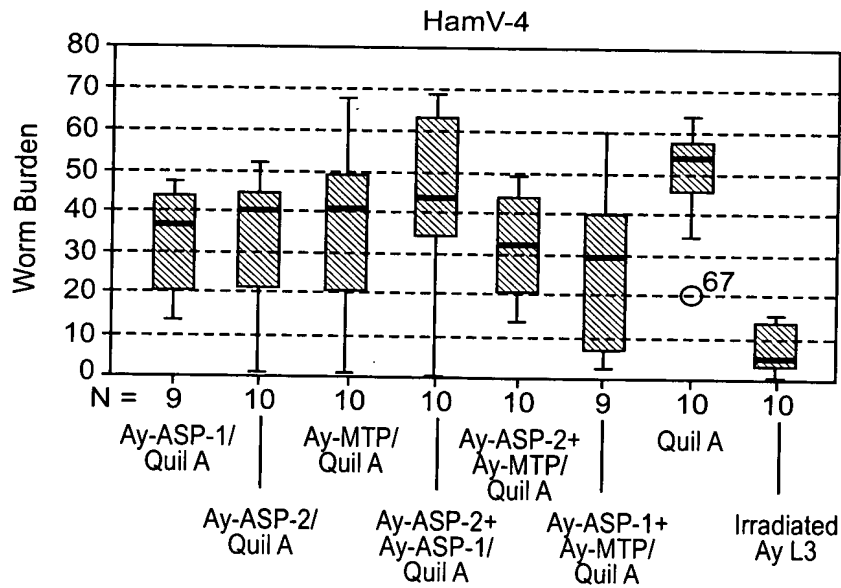


Figure 77B

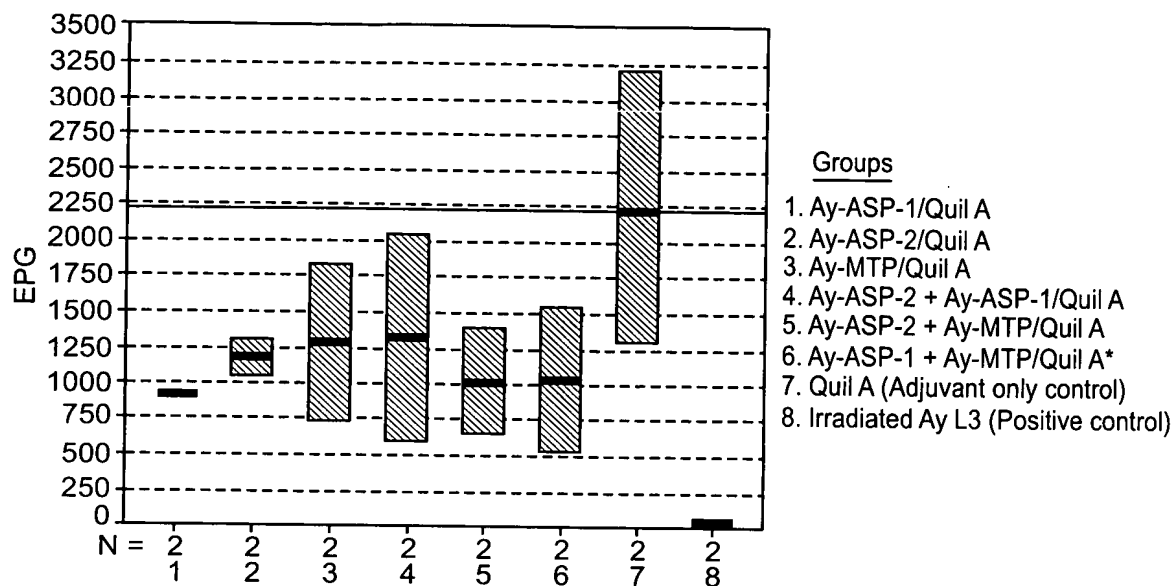


Figure 78A

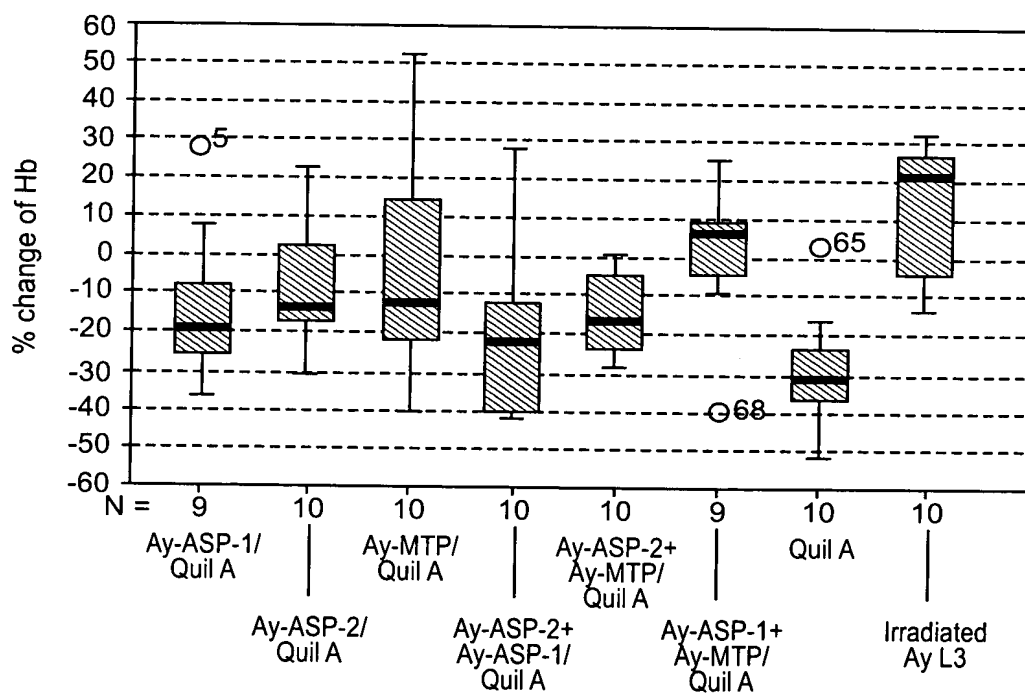


Figure 78B

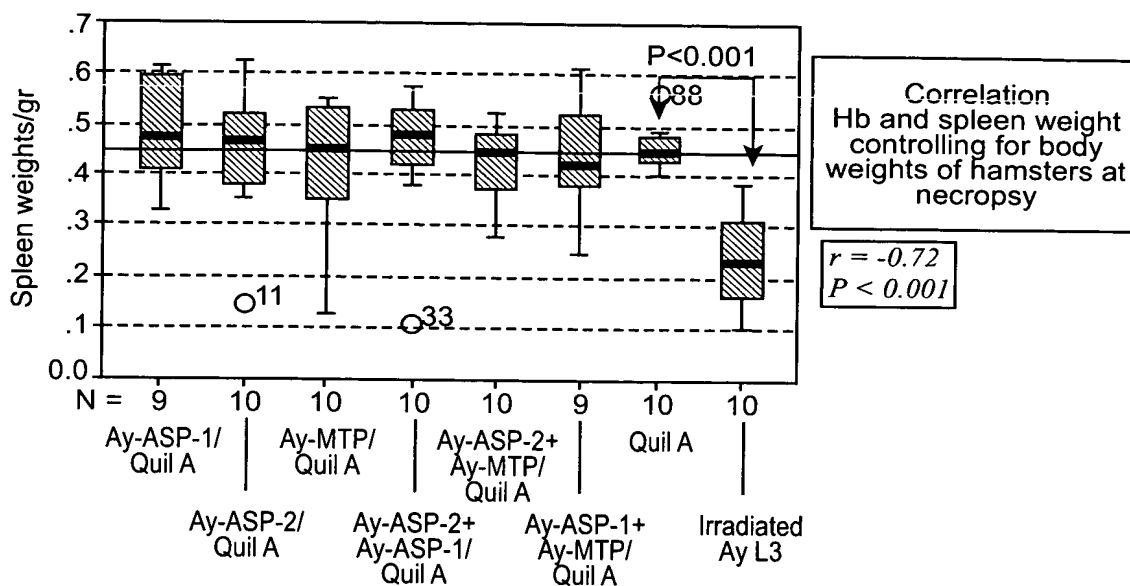


Figure 79A

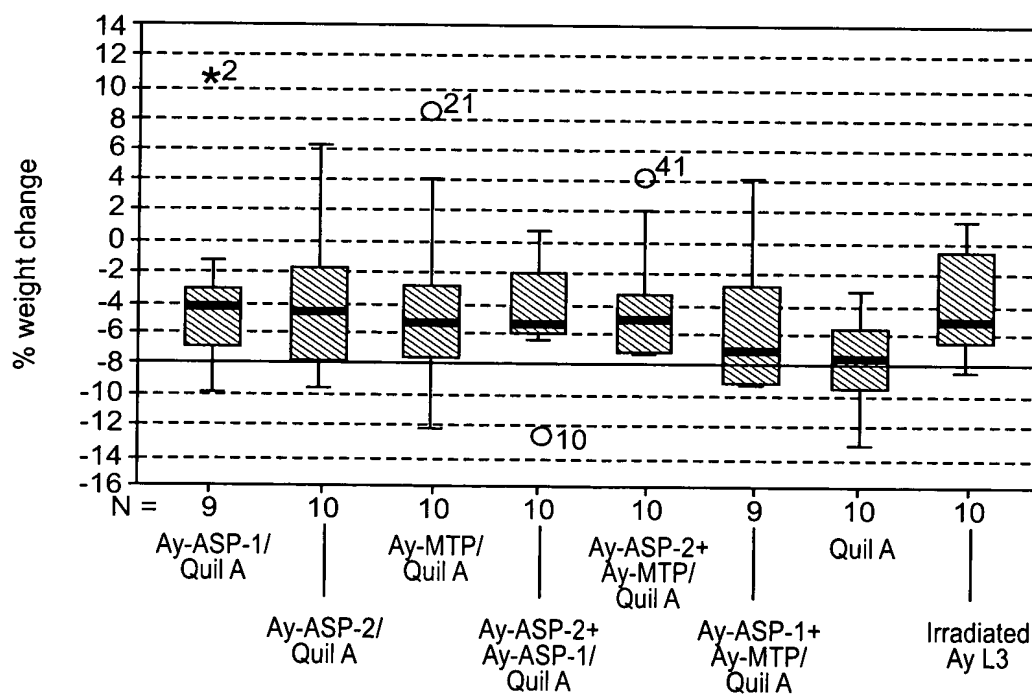


Figure 79B

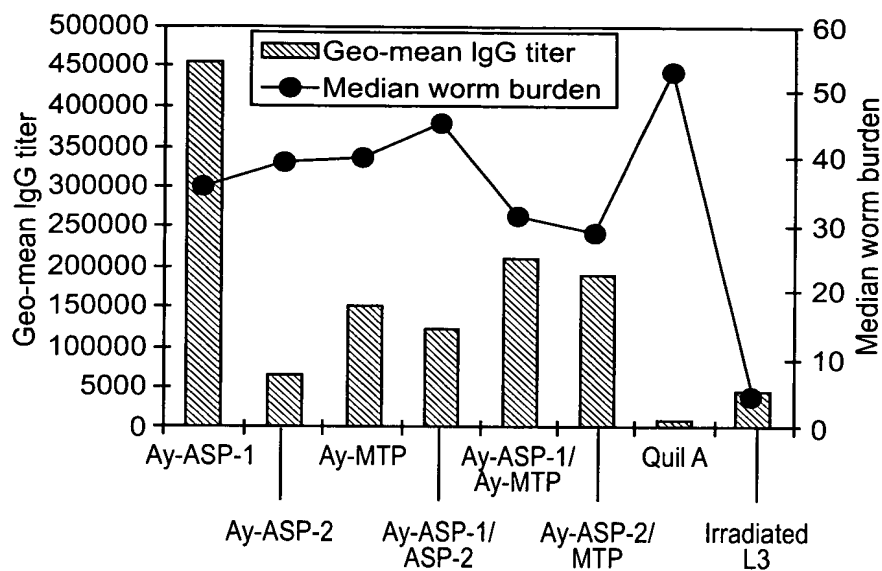


Figure 80A

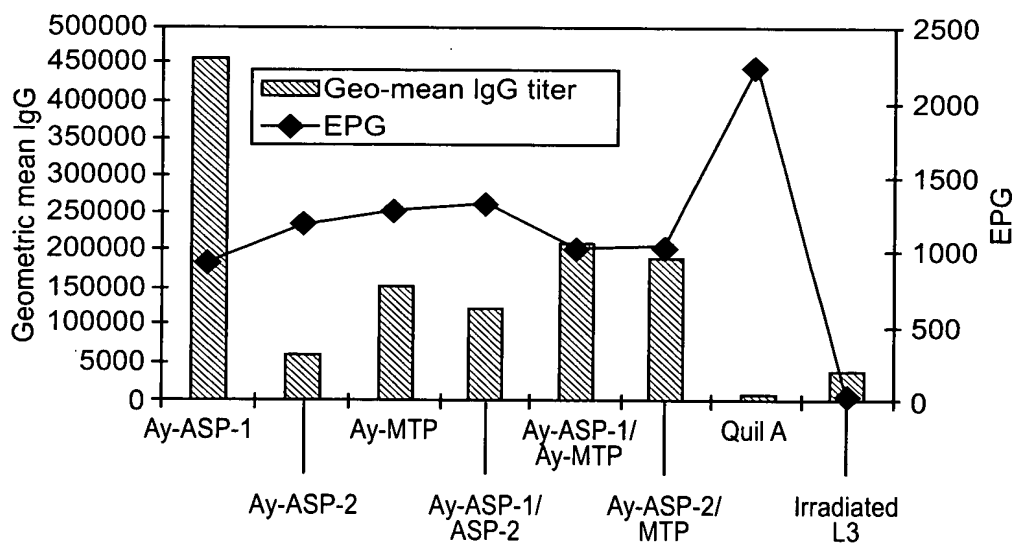


Figure 80B